California Regional Water Quality Control Board
Santa Ana Region

January 23, 2002

ITEM: 10

SUBJECT: Staff Report on the Update of the Clean Water Act Section 303(d) List of Impaired Waterbodies within the Santa Ana Region

DISCUSSION

Section 303(d) of the Clean Water Act requires states to update the list of surface waterbodies for which water quality standards are not attained, or are not expected to be attained with the implementation of technology-based controls. These waterbodies are considered "impaired". The resulting 303(d) list of impaired waterbodies includes a description of the pollutants causing impairment and a schedule for developing a Total Maximum Daily Load (TMDL) for each pollutant. The TMDL is the maximum load of a pollutant that can be discharged and still ensure the attainment of applicable water quality standards. Placing a waterbody on the Section 303(d) list of impaired waterbodies requires the development of a TMDL(s) to address the source(s) of impairment. Federal TMDL regulations require states to update the Section 303(d) list of impaired waterbodies and submit the list to US Environmental Protection Agency (USEPA). On behalf of the State Water Resources Control Board (State Board), all the Regional Boards are in the process of compiling recommended changes to the current 303(d) list. The State Board will review recommendations from all the Regional Boards, hold a public hearing to consider public comments, and adopt an updated statewide 303(d) list for submittal to the USEPA by April 2002.

At the October 26, 2001 Regional Board meeting, Board staff presented recommended revisions to the existing 1998 303(d) list for the Region, including additions and deletions. Staff also provided Waterbody Worksheets that summarized the data reviewed and staff's recommendation for each waterbody.

At the October 26, 2001 meeting, Orange County Health Care Agency (OCHCA) staff indicated the desire to meet with Board staff to review the proposed listings for beaches and coastal creeks, which were based on bacterial contamination data. On November 1, 2001, Board staff met with OCHCA staff to review the proposed list of waterbodies. Based on this discussion, additional changes to the revised 303(d) list recommended by Board staff on October 26 are now proposed. These include the addition of certain water bodies and deletion of certain waters that staff had proposed be added to the 1998 list. Other minor modifications are also appropriate. These changes and the rationale for these changes are provided in Attachment A. The data reviewed to support these changes are summarized in the Waterbody Worksheets in Attachment E.

Board staff received written comments on the October 26, 2001 staff report from the US Environmental Protection Agency (USEPA). These comments raised questions on the process and methodology staff utilized to identify waterbodies as impaired. Staff discussed the comments with USEPA, and as result of that discussion, USEPA has revised the comment letter. No changes to the 303(d) list as recommended on October 26, 2001 are proposed based upon USEPA comments. Attachment B contains USEPA's comment letter and staff's responses to USEPA comments.

Comments were also received from the Southern California Alliance of Publicly Owned Treatment Works (SCAP). These comments are included in Attachment C. SCAP's comments raise issues with the process for adoption of a statewide 303(d) list. Because the issues SCAP raises pertain to the statewide process and are not specific to the Regional Board review process, Board staff conferred with State Board staff on how best to address these comments. State Board staff have indicated that given the relevance of SCAP's comments to the statewide process, the responses are best prepared by State Board staff. Therefore, Regional Board staff have forwarded these comments to the State Board.

STAFF RECOMMENDATION

Direct staff to transmit the revised 303(d) list as shown in Attachment D, comments received and all other relevant materials to the State Water Resources Control in support of the Statewide Section 303(d) list adoption.

ATTACHMENTS

Attachment A: Proposed revisions to the recommended October 26, 2001 Santa Ana Region 2001/2002 Section 303(d) List of Impaired Waterbodies

Attachment B: Comment Letter from the US Environmental Protection Agency.
Response to US Environmental Protection Agency comments.

Attachment C: Comment Letter from the Southern California Alliance of Publicly Owned Treatment Works (SCAP)

Attachment D: Santa Ana Region 2001/2002 Section 303(d) List (incorporates all proposed changes)

Attachment E: (Revised) Waterbody Worksheets

ATTACHMENT A

PROPOSED REVISIONS TO THE RECOMMENDED OCTOBER 26, 2001 SANTA ANA REGION 2001/2002 SECTION 303(D) LIST

Proposed Additions to the Recommended 303(d) List

Waterbody	Pollutant	TMDL Priority	TMDL Development	
			Start Date	End Date
Santa Ana Delhi Channel	Fecal coliform	Medium	2010	2015
Pelican Point Middle Creek	Total/Fecal Coliform	Medium	2008	2011
Pelican Hill Waterfall	Total/Fecal Coliform	Medium	2008	2011

Santa Ana Delhi Channel: Santa Ana Delhi Channel is tributary to Upper Newport Bay and drains parts of the Cities of Santa Ana and Costa Mesa. Based on the fecal coliform data collected by OCHCA, OCHCA staff recommended that Santa Ana Delhi Channel be added to the 303(d) list of impaired waterbodies. In addition, during the development of the Newport Bay Coliform TMDL in 1999, Regional Board staff reviewed the fecal coliform data for Santa Ana Delhi Channel that indicated non-compliance with the Basin Plan fecal coliform standard (see the accompanying Waterbody Worksheet in Attachment E for a summary of the data). Therefore, staff concurs with OCHCA that it is appropriate to include the Santa Ana Delhi Channel on the 303(d) list of impaired waterbodies. The TMDL development schedule proposed is consistent with that specified for San Diego Creek since it is likely that these TMDLs would be developed in concert.

Pelican Point Middle Creek and Pelican Hill Waterfall: In the October 26, 2001 staff report, Regional Board staff proposed adding Pelican Point Creek as impaired due to bacterial contamination (based on OCHCA data). OCHCA staff indicated that Board staff had incorrectly combined three separate creeks, Pelican Point Creek, Pelican Point Middle Creek and Pelican Hill Waterfall, into the single Pelican Point Creek. OCHCA staff advised that it is appropriate to distinguish each of these waters individually. Furthermore, based on upon an evaluation of the data, Pelican Point Middle Creek and Pelican Hill Waterfall are proposed to be included on the 303(d) list due to bacterial contamination, as well as Pelican Point Creek. Staff is proposing that the TMDL development start and end dates be consistent with the other coastal creeks (Muddy Creek, Los Trancos Creek and Buck Gully Creek).

Proposed Modifications to the Recommended 303(d) List

Waterbody	Pollutant	TMDL Priority	TMDL Development	
			Start Date	End Date
Pelican Point Creek	Total/Fecal Coliform	Medium	~~2009~~ 2008	2011
Seal Beach ~~1st Street~~ San Gabriel River Mouth to Main Street Pier	Bacteria (wet season)	High	2007	2011

Pelican Point Creek: The tentative TMDL development start date should be 2008 instead of 2009 to be consistent with the TMDL development start dates for the other coastal creeks.

Seal Beach from San Gabriel River Mouth to Main Street Pier: Based on input from OCHCA staff, the listing should be revised to reflect that the actual beach area that is impaired due to bacterial contamination extends from the San Gabriel River Mouth (not 1st Street) to the Main Street Pier.

Proposed Deletions to the Recommended 303(d) List

Waterbody	Pollutant	TMDL Priority	TMDL Development	
			Start Date	End Date
Seal Beach Breakwater	Bacteria (wet season)	High	2007	2011
Huntington Beach – Dog Beach	Bacteria (wet season)	High	2007	2011
Newport Beach – 19th Street to 43rd Street	Bacteria (wet and dry seasons)	High	2005	2009
Little Corona Beach	Bacteria (wet season)	High	2007	2011

Seal Beach Breakwater: OCHCA staff clarified that the area of Seal Beach at the Breakwater is within the same area as "Seal Beach – San Gabriel River Mouth to Main Street Pier that is proposed for inclusion on the 303(d) list. Therefore, there is no for this separate listing.

Huntington Beach – Dog Beach: Dog Beach area was proposed to be listed based on the criteria staff utilized (7 consecutive days of beach posting during the 3 year assessment period). Based on discussions with OCHCA staff and a review of the beach posting information, it was determined that Dog Beach had only 1 occurrence in 1999 of 7 consecutive days of posting. There have been no postings since that time. Furthermore, the posting resulted from rainfall events and because of OCHCA's monitoring schedule, monitoring after the initial posting did not occur prior to the 7th day. OCHCA staff believes that if they had been performing the follow-up testing on a daily basis, the posting would likely have been lifted before the 7th day. Therefore, staff is proposing that Dog Beach be removed from the 303(d) list and instead added to the Priority 1 monitoring list. OCHCA staff believes that this is appropriate.

Newport Beach 19th Street to 43rd Street Beach: This beach location is not on the ocean front, but rather within Newport Bay. The Newport Bay Coliform TMDL in the Basin Plan and approved by USEPA addresses the bacterial contamination at this location.

Little Corona Beach: Like Huntington Beach – Dog Beach, Little Corona Beach was also proposed to be listed based on having 7 consecutive days of the beach posting in 1999. Again, there have been no postings at Little Corona Beach since that time. The 1999 posting occurred as a result of rainfall. Follow-up monitoring after the initial posting did not occur prior to the 7th day. OCHCA staff believes that if they had been performing the follow-up testing on a daily basis, the posting would likely have been lifted before the 7th day. Therefore, staff concurs with OCHCA recommendation to remove Little Corona Beach from the 303(d) list and to add the Beach to the Priority 1 monitoring list.

ATTACHMENT B

USEPA COMMENTS

REGIONAL BOARD STAFF RESPONSES TO USEPA COMMENTS

INTERAGENCY MEMO

TO: HOPE SMYTHE, SANTA ANA REGIONAL WATER BOARD

from: Peter Kozelka, USEPA Region 9
subject: comments on draft update of the 303(d) list
date: ~~12/05/01~~ 11/26/01
CC: PAVLOVA VITALE

EPA Region 9 has received the staff report, *draft Update of the 303(d) List* for Santa Ana RWQCB. This staff report makes a good start at presenting water quality assessment results; however, the *draft Update* is not complete and requires more thorough and transparent explanation of the decision process/methodology for listing or de-listing waterbodies. For example we cannot determine the weight of evidence approach used by Regional Board staff. Nor is it clearly articulated how staff interpreted numeric monitoring results against narrative water quality objectives. Regional Board staff has recommended that some waterbodies require further monitoring based upon few exceedances and/or limited data sets.

~~Also, it is uncertain if there is sufficient cause to warrant delisting waterbodies or "off ramping" from 1998 303(d) list based on actions other than establishing a TMDL.~~ RB8 appears to have sufficient data to support delisting Santa Ana River. Chino Creek, Cucamonga Creek and XXX(Mill?) Creek may be removed from future lists due to improvements in water quality arising from permit related actions.

Here are some specific comments or other areas for revision.

1. The *draft Update* does not include a complete listing of data sources considered for this *Update*. It does provide a generic description of data sources yet it is difficult to determine which data sets were considered as part of waterbody assessments. As outlined in 40 CFR 130.7 (b)(5), EPA expects States to consider <u>all</u> existing and readly available (water, sediment, toxicity and tissue) data and other information as part of the assessment. Certainly this includes NPDES data included in DMR reports and academic research results, just to name a few. The staff report does not provide sufficient rationale (e.g., data quality, sample size, etc.) for deciding to exclude data and information from consideration as required in 40 CFR 130.7 (b)(6). Please attach a complete list of data sources actively solicited, submitted and those disregarded (with rationale) in the *Update*. Any data not listed is presumed to have not been used during this assessment, e.g., sediment monitoring data.

2. It is unclear why Regional Board staff believe that identifying a waterbody as impaired should not be based on a limited amount of data. The 1997 EPA 305(b) Guidance outlines some important considerations for making Aquatic Life Use Support determinations. Section 3 of the Guidance describes determinations for toxicants (page 3-18) and states partial support "for any one pollutant, acute or chronic criteria exceeded more than once within a 3-year period, but in <10% of samples." Further along in section 3 (3-22), there is a decision tree depicting partial support <u>within</u> nonattainment of beneficial uses and therefore monitoring data indicates the waterbody should be listed as impaired. The Guidance discusses minimum sample size only within toxicant assessments, so it does <u>not</u> apply to conventional, toxicity and biological data sets. Also, the draft Update neglects to mention the "magnitude of exceedance" of water/sediment/tissue results in its listing methodology. We recommend Regional Board staff list waterbodies with extremely high pollutant levels even if limited data are available. This is consistent with the Guidance, which implies that determinations can be made using smaller sample sets (3-18).

3. The *draft Update* states Regional Board staff used a weight of evidence approach in their determinations for each waterbody. This catch-all-phrase implies that multiple data sets were assessed for each waterbody, yet the decision process is not clearly described as it should be. In essence, staff need to provide more complete explanation of their determination. If staff have applied a universal weight of evidence approach then several examples may suffice to explain how it was applied to several waterbodies and yielded different results, much like case studies presented in 305(b) Guidance (3-24 to 3-26). However, if staff have applied their best professional judgment on a case-by-case basis then rationale must be more clearly articulated for assessment of each and every waterbody.

4. The *draft Update* describes some aspects of Beach closures due to bacteriological contamination. We are uncertain as to why only "narrative information" was reviewed. Any reason why Heal the Bay report card information could not be used independently to assess beach water quality? Just how are bacteriological data collected "in a manner inconsistent with the Ocean Plan objectives? It is not clear if beach posting for seven consecutive days for each and every year or just one year in four years) was required for inclusion on 303(d) list. The 305(b) Guidance suggests that less than one week's beach closure per year is sufficient for partial support; more than one week's duration does not support primary contact recreation use. EPA requests better articulation of assessment methodology and more consistency with 305(b) guidelines for beach closures (3-33 to 3-35).

EPA acknowledges the draft Update had listed two separate beaches and will now use only one name, Seal Beach. This renaming is not considered a movement to delist, simply a clarification issue.

5. The *draft Update* includes Water Quality Assessment worksheets outlining monitoring results per waterbody. It is uncertain as to why these worksheets have fish tissue results compared with several different tissue screening values. We recommend Regional Board staff make comparisons against just one value (presumably the most protective tissue value). Other aspects of tissue assessments need to be stated clearly for all to understand the rationale (see item 3 above).

6. Please modify Water Quality Assessment worksheets should be verified to be consistent with statements in *draft Update*. Some worksheets have stated Big Bear Lake and in-flowing creeks should be added to 303(d) list and yet these waterbodies appear in Table 4 describing Monitoring priority waterbodies. ~~Also, was there supposed to be Table 1 in the *draft Update*?~~

7. Newport Bay has been previously listed in 1998 for metals, pesticides and priority organics. Pursuant to consent decree, EPA and Regional Board staff are developing TMDLs for a limited suite of toxicants. Region 9 encourages Regional Board staff to continue to review data relevant to all potential contaminants within San Diego Creek, Upper and Lower Bay including Rhine Channel. For example, staff should complete assessments for nickel, polyaromatic hydrocarbons (PAHs), dioxins and other potential toxicants outside those cited in the consent decree. Per phone discussion (11/15/01) with EPA Region 9 staff and Santa Ana Regional Board staff, there will be no changes in draft Update for Newport Bay impairments due to "metal, pesticides and priority organics." Revisions can be completed once consent decree modifications or settlement issues have been finalized in writing.

8. Recent evidence of aquatic invasive species, *Caulerpa*, has been of concern, thus Regional Board staff have inquired about including this algae as part of 2002 list. To date, EPA feels invasive species are probably not included in pollutants as defined in section 303(d) of Clean Water Act.

EPA Region 9 Water Division staff recognize the complexities of assessing water quality data and the obvious implications and consequences when waterbodies are placed on the 303(d) list. We look forward to reviewing the next draft Update list prior to sharing this report with Regional Board, so we all can feel confident the list and methodologies are transparent and comprehensible. We suggest sharing the revised draft with us by Dec. 12, one week prior to Regional Board meeting on Dec. 19.

RESPONSE TO USEPA COMMENTS

Comment
USEPA supports delisting the Santa Ana River for total dissolved solids and nitrogen. USEPA recognizes that considering delisting Chino Creek, Cucamonga Creek/Mill Creek in the future may occur if water quality improvement are made as a result of implementing applicable permits (dairy general and stormwater permits).

Staff Response
Comment noted.

Comment
USEPA cannot determine the "weight of evidence" approach used by Board staff .

Staff Response
The weight of evidence approach applies to the use of 3 types of data to determine impairment: water column chemistry, sediment chemistry and benthic biology. Typically, impairment of a waterbody is defined if all three types of data show exceedances.

In the case of the Santa Ana Region, this information was not available for all waterbodies assessed. As summarized in the October 26, 2001 staff report, most of the data reviewed by staff were water column data. No sediment or biological community data were submitted or available for review.

Comment
USEPA is unclear how staff interpreted numeric monitoring results against water quality objectives.

Staff Response
For each waterbody assessed, Board staff first identified the applicable beneficial uses for that waterbody as specified in the Basin Plan or based on Best Professional Judgement (BPJ) for those waterbodies not specifically listed in the Basin Plan. Staff then identified water quality objectives intended to protect identified beneficial uses. Narrative and numeric water quality objectives specified in the Basin Plan, statewide water quality objectives (California Toxics Rule) or other regulatory objectives (FDA Action Levels) were identified. Staff determined if a minimum of 10 data points of a particular parameter were available for that waterbody (10 data points across the 3 year period or 10 sampling locations within a waterbody). The data were then compared to the applicable water quality objective to identify if the appropriate objective was being exceeded. If there was an exceedance of an objective, the appropriate beneficial use(s) were noted as being not supported. The waterbody was then recommended for inclusion on the 303(d) list. Board staff did not require a certain percentage of exceedances (*i.e.,* 10% of values needed to exceed the objective) for staff to consider a listing. Staff recommended listing if any of the 10 minimum required data points exceeded an objective.

Staff believes that any inherent conservatism in specifying a minimum of 10 data points is balanced by a very conservative approach of proposing a 303(d) listing if any of the data exceeded an objective.

Comment
USEPA believes that staff has not provided a complete listing of all data considered for the update. Specifically, USEPA is concerned that NPDES discharge data and academic research data were not reviewed.

Staff Response
The October 26, 2001 staff report contained a list of waterbodies assessed and a general description of the types of data reviewed. In addition, the Waterbody Worksheets provide a complete description of data reviewed for each waterbody assessed. Nonetheless, a complete list of all data received and reviewed is provided in an attachment to these responses.

With respect to NPDES and Waste Discharge data, Board staff did solicit input from the Regional Board's Surveillance and Enforcement section on data submitted pursuant to permit requirements. Staff believes, however that exceedances of NPDES permit limits should not serve as the basis for identifying waterbodies as impaired. Presumably any exceedance of a permit condition (technology based controls) would be short-term and addressed through the Board's regulatory program. Board staff did review receiving water data submitted pursuant to the Orange County stormwater permit. However, because of time constraints, Regional Board staff has not completed the review of the San Bernardino County stormwater quality data. In addition, stormwater quality data collected by Riverside County is not in an electronic format. Therefore, Regional Board staff will continue to review both the San Bernardino and Riverside County stormwater quality data. If the data support any changes to the 303(d) list, Board staff will provide any recommendations to the State Board for inclusion in the Statewide 303(d) list submittal

Comment
USEPA does not believe that staff have provided adequate justification for relying on a minimum of 10 data points to make impairment decisions. USEPA comments that the 305(b) Assessment guidance recommends additional considerations for determining Aquatic Life Support determinations.

Staff Response
Regional Board staff believe that because of the variability associated with environmental data, at least 10 data points are needed to make a judgement about the status of a waterbody. In fact, staff would definitely prefer more than 10 data points. Staff recognizes that the 305(b) Assessment Guidance is more complex than explained in the October 26, 2001 staff report. The 305(b) guidance recommends a minimum of 10 data points (for toxicants) to make "fully-supporting" or "not-supporting" decisions. When less than 10 data are available (and again, this is for toxicants), the 305(b) guidance recommends that states use discretion and consider other factors (such as magnitude of exceedance and if there are multiple numbers of pollutants with exceedances). Given that the 305(b) report is silent on the recommended number of samples for conventional or other pollutants, and given the lack of specific state guidance, Board staff felt it was appropriate to use a consistent methodology for all parameters and therefore, utilized a minimum of 10 data points.

Staff believes that the fact that the guidance recommends a minimum data set of 10 (along with other considerations) indicates that staff's approach is reasonable. Furthermore, as explained above, staff believes that the 10 data point "rule" combined with any noted exceedance resulting in a 303(d) listing, produces a supportable 303(d) listing. Also, USEPA needs to keep in mind that, as explained in the October 26, 2001 staff report, the "10 data points" could be 1 station in a waterbody with 10 data points or it could be several stations sampled throughout a waterbody with a total of 10 data points.

Finally, staff would also like to emphasize that for those waterbodies and pollutants where there are fewer than 10 data points, staff recognizes the need to obtain the data to make an impairment decision. Staff is working on a long term monitoring strategy that will result in the collection of the needed data for the next 303(d) listing cycle.

Comment
The October 26, 2001 staff report does not take into account the "magnitude of exceedance" for deciding a listing decision. USEPA recommends that waterbodies with extremely high pollutant levels (even if less than 10 data points are available) be placed on the 303(d) list.

Staff Response
USEPA fails to specify what they consider "extremely high" exceedances, and therefore staff believes that taking USEPA's approach would not be consistent for all parameters and all waterbodies. As previously explained, staff first looked to determine if there were a minimum of 10 data points. If so, then staff determined if there were any exceedances of applicable standards regardless of the magnitude of exceedance. If so, then the waterbody was proposed for listing. In order to be consistent, staff does not believe that waterbodies should be considered for listing because of an "extremely high" magnitude of exceedance where the minimum data set requirement was not met.

Comment
USEPA believes that additional detail needs to be provided on how the case-by-case decisions were made for each waterbody.

Staff Response
A 303(d) Listing Decision Flow Chart is attached to these responses. Furthermore, the Waterbody Worksheets contain a summary of the data, the waterbody beneficial uses and applicable water quality objectives, the number of exceedances of objectives, and staff's recommendation for that waterbody. Staff believes that this is adequate for providing the case-by-case rationale for each waterbody.

Comment
USEPA questions why only beach posting information (narrative information) was used for evaluating the beach status. USEPA also questioned how the bacterial data were inconsistent with Ocean Plan objective, as stated in the October 26, 2001 staff report. USEPA questions if the 7 consecutive days of beach closure was for a 1year period or the 3-year assessment period. USEPA mentions that the 305(b) guidance suggests partial support of beneficial uses for beaches closed less than 7 days a week in a year's period and loss of beneficial uses for beach closed more than 7 days in a year (both constitute impairment). USEPA recommends that the Regions' beach assessment be more consistent with the 305(b) guidance.

Staff Response
Narrative information for beaches was reviewed because there were many cases for which the appropriate number of samples to determine compliance with the Ocean Plan standard (5 samples per 30 day period) were not collected. However, it is important to emphasize that beach postings for bacterial contamination are based on bacterial data collected pursuant to the California Health and Safety Code (AB411).

Staff agrees that the October 26, 2001 staff report was unclear as to what time period the 7 consecutive days of posting constituted. Staff's criteria for considering listing a beach was that there had to be 7 consecutive days of beach posting during the 3 year assessment period. While the time frame differs

between staff's methodology and the 305(b) guidance, staff believes that our approach is more clearly defined and specific than outlined in the 305(b) guidance. The 305(b) guidance specifies that less than 1 week of closure (during a year) indicates non-support. It is not clear what constitutes less than 1 week:; 1 day, 3 days or up to 6 days. In many cases in the Region, beaches are closed due to sewage spills. These events are transitory in nature and are addressed through the implementation of technology based controls. Staff believes that the methodology and criteria that staff used are clear and result in a 303(d) listing that reflects real water quality problems.

Comment
USEPA questions why fish tissue data are compared to several tissue screening values. USEPA recommends that staff evaluate the data against the most stringent standard.

Staff Response
Because of the lack of adequate fish tissue data, no 303(d) listing recommendations were made based on fish tissue data, Staff believes that it is appropriate to consider all standards and screening values that may be applicable since the various screening values address different impacts to applicable beneficial uses. For example, the FDA action levels address impacts to human health (through fish consumption), while the NAS guidelines address impacts to wildlife. .

Comment
USEPA notes that the Waterbody Worksheets for Big Bear Lake and some of the tributaries to the Lake are inconsistent with the staff recommendation in the Staff Report.

Staff Response
Comment noted. Staff will revise the Waterbody Worksheets where appropriate.

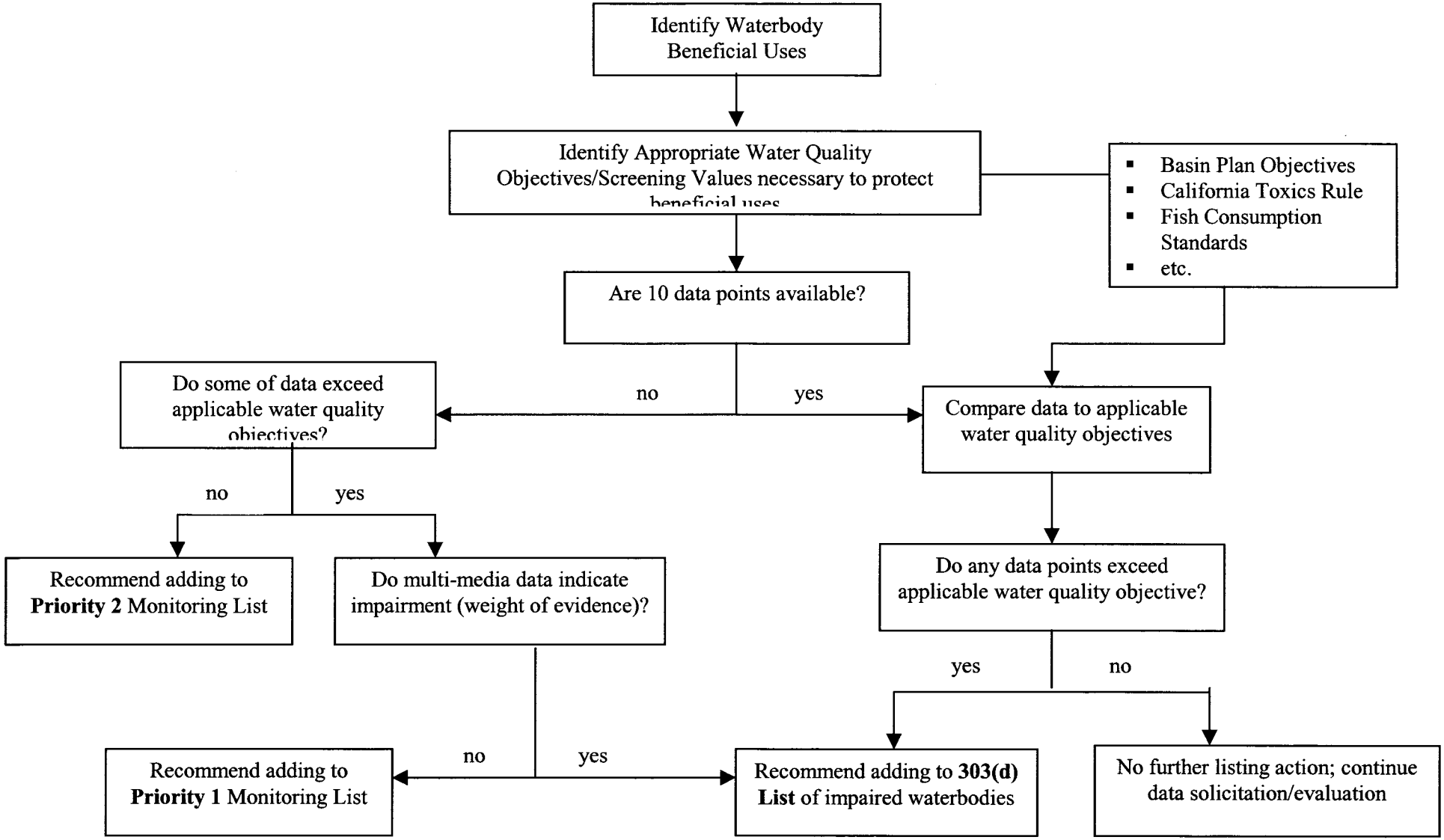
Comment
USEPA requested that additional assessment of Newport Bay watershed waterbodies for toxics be conducted (outside of the USEPA development of the list of toxic constituents for which TMDLs are to be developed).

Staff Response
As noted in USEPA's revised comments, USEPA recognizes that staff is not proposing any deletions or changes to the current listing for toxics for waterbodies in the Newport Bay watershed. Therefore, if individual constituents are determined to be causing impairment in the future, staff can modify the 303(d) listing as appropriate.

Comment
USEPA is not recommending listing a waterbody as impaired for the invasive algae *Caulerpa.*

Staff Response
Comment noted.

Santa Ana Region
303(d) Listing Decision Flow Chart



Data Sources Table

WATER BODY NAME	TYPE OF DATA REVIEWED	SOURCE	YEARS/ SEASON
Anaheim Bay	Fish Tissue	• Coastal Fish Contamination Program - State Water Resources Control Board	**1999, 2000 Season not applicable**
	Water Column Chemistry	• Orange County Public Facilities Resource Dept	**1999,2000 Wet & Dry**
Bolsa Chica	Water Column Chemistry	• Orange County Public Facilities Resource Dept	**1999,2000 Wet & Dry**
Buck Gully Creek	Water Column Chemistry	• Orange County Health Care Agency	**1997-2001 Wet & Dry**
Huntington Harbour	Water Column Chemistry	• Orange County Public Facilities Resource Dept	**1999,2000 Wet & Dry**
	Mussel Tissue	• Mussel Watch - State Water Resources Control Board	**1998-2000 Season not applicable**
Huntington Beach State Park	Fish Tissue	• Coastal Fish Contamination Program – State Water Resources Control Board	**1999, 2000 Season not applicable**
	Water Column Chemistry	• Orange County Health Care Agency	**1999-2001 Wet & Dry**
Los Trancos Creek	Water Column Chemistry	• Orange County Health Care Agency • The Irvine Company	**1997-2001 Wet & Dry**
Muddy Creek	Water Column Chemistry	• Orange County Health Care Agency • The Irvine Company	**1997-2001 Wet & Dry**
Newport Bay	Fish Tissue	• Coastal Fish Contamination Program – State Water Resources Control Board	**1999, 2000 Season not applicable**

WATER BODY NAME	TYPE OF DATA REVIEWED	SOURCE	YEARS/ SEASON
Newport Beaches	Fish Tissue	• Coastal Fish Contamination Program – State Water Resources Control Board	**1999, 2000 Season not applicable**
	Water Column Chemistry	• Orange County Health Care Agency	**1999-2001 Wet Only**
Ocean Waters (oil platforms)	Fish Tissue	• Coastal Fish Contamination Program – State Water Resources Control Board	**1999, 2000 Season not applicable**
Pelican Point Creek	Water Column Chemistry	• Orange County Health Care Agency	**1997-2001 Wet & Dry**
Pelican Point Middle Creek	Water Column Chemistry	• Orange County Health Care Agency	**1997-2001 Wet & Dry**
Pelican Hill Waterfall	Water Column Chemistry	• Orange County Health Care Agency	**1997-2001 Wet & Dry**
San Diego Creek	Water Column Chemistry	• RWQCB 8 Nov 24, 1998 Newport Bay TMDL Problem Statement	**1997,1998 Wet & Dry**
Santa Ana Delhi Channel	Water Column Chemistry	• Orange County Health Care Agency • RWQCB 8 Nov 24, 1998 Newport Bay TMDL Problem Statement	**1997,1998 Wet & Dry**
Seal Beach	Water Column Chemistry	• Orange County Health Care Agency	**1999-2001 Wet & Dry**
	Fish Tissue	• Coastal Fish Contamination Program – State Water Resources Control Board	**1999,2000 Season not applicable**
Canyon Lake	Sediment	• City of Canyon Lake	**1986-1997 Season not applicable**
Cucamonga Creek	Water Column Chemistry	• Orange County Water District	**1998,2000,2001 Wet Only**
Chino Creek	Water Column Chemistry	• Orange County Water District	**1997-2000 Wet & Dry**

WATER BODY NAME	TYPE OF DATA REVIEWED	SOURCE	YEARS/ SEASON
Mill Creek	Water Column Chemistry	• Orange County Water District	**1997-2000 Wet & Dry**
San Timoteo Creek	No ambient data received only outfall data	• Yucaipa Valley Municipal Water District	**Not applicable**
Santa Ana River Reaches 2, 3, 4, 5	Water Column Chemistry	• Orange County Water District • RWQCB 8 Monitoring data	**1997-2000 Wet & Dry**
Temescal Creek	Water Column Chemistry	• Orange County Water District	**1997-2000 Dry Only**
Big Bear Lake	Water Column Chemistry	• Big Bear Lake Municipal Water District	**2000 Wet & Dry**
Boulder Creek	Water Column Chemistry	• Big Bear Lake Municipal Water District	**2000 Wet & Dry**
Grout Creek	Water Column Chemistry	• Big Bear Lake Municipal Water District	**2000 Wet & Dry**
Knickerbocker Creek	Water Column Chemistry	• Big Bear Lake Municipal Water District	**2000 Wet & Dry**
Metcalf Creek	Water Column Chemistry	• Big Bear Lake Municipal Water District	**2000 Wet & Dry**
Rathbun Creek	Water Column Chemistry	• Big Bear Lake Municipal Water District	**2000 Wet & Dry**
San Jacinto Creek	Water Column Chemistry	• Lake Hemet Municipal Water District	**1998-2001 Wet Only**
Strawberry Creek	Water Column Chemistry	• Lake Hemet Municipal Water District	**1998-2001 Wet Only**
Varies throughout the Region	Water Column Chemistry	• NPDES/WDR discharger monitoring data	**1998-2000 Wet & Dry**

ATTACHMENT C

COMMENT LETTER FROM THE

SOUTHERN CALIFORNIA ALLIANCE OF PUBLICLY OWNED TREATMENT WORKS (SCAP)

ATTACHMENT C

SCAP
SOUTHERN CALIFORNIA ALLIANCE OF
PUBLICLY OWNED TREATMENT WORKS

November 1, 2001

Gerald Thibeault
Santa Ana Regional Board
3737 Main Street, Ste 500
Riverside, CA 92501 3339

Re: SCAP's List of Principals for the 303(d) Listing Process for 2002

Dear Mr. Thibeault:

Attached please find SCAP's final list of Principals for the 303(d) Listing Process for 2002.

We would appreciate a response to our comments on principals for listing criteria.

Sincerely,

Raymond C. Miller
Executive Director

Enclosure

Cc: Hope Smythe

30200 Rancho Viejo Road, Suite B
San Juan Capistrano, CA 92675
Fax: 949/489-0150 Tel: 949/489-7676

SCAP

949.489.7676 E-mail address: kris@scap.occoxmail.com 949.489.0150 (FAX)

Principals for 303(d) Listing Process

1. Divide 303(d) list into a preliminary (watch) list and an action list. Watch list would be used for further data gathering and assessment.
2. A "transparent" process for listing and de-listing process.
3. A State listing process that includes:
   - A publicly reviewable document
   - A description of how different types of data will be evaluated
   - Explanation of how the following factors will be considered:
     a. data quality, age, degree of confidence, degree of exceedances
   - description of procedures for collecting and using ambient water quality data
   - description of methods and factors to develop a prioritized schedule
   - requirements to develop listing methodology which includes descriptions of factors used to "de-list" water bodies.
4. A weight of evidence approach
   - Consideration of spatial, temporal (at several scales), and hydrologic variations and their effects on water quality
5. For uses related to aquatic life, consider biological indicators as having a greater weight than pollutant concentration levels, to the extent that some waters may have unimpaired beneficial uses even though some chemical criteria have been exceeded. Water quality objectives or criteria that are based on national guidance may not be reflective of local on-site specific conditions.
6. Consider on a case-by-case basis whether or not a water body is oligotrophic, mesotrophic or eutrophic and provide criteria for each type.
7. Eliminate subjective criteria such as "significant amount observed."

8. Control Measures – Recognition of control measures already in place – or expected to be installed within the next listing cycle – that will result in protection of beneficial uses. Control measures that should be considered an adequate basis for de-listing include permits, clean up and abatement, cease and desist, or time schedule orders, and watershed management plans that are enforceable and include a time schedule for compliance with objectives.
9. Analytical and Public Review Process should contain:
   - A thorough explanation of the thinking process that went into each decision should be made available in writing
   - The Regional Board should document each of the types of data that support water quality decision-making and explain how they are used in the context of applicable water quality standards to support different water quality determinations
   - A description of and reference for the quality assurance procedures should be included in water quality assessment and listing documentation. The Regional Board should define data quality requirements and how they utilize and interpret data to make decisions about whether the water body is impaired or attaining water quality standards.
10. Sample Size -- In the CALM draft, EPA is recommending that in order to have a high level of confidence in the results, a sample size of at least 30 samples is necessary. Recognizing that sample size is a big debate, we believe that a statistically-based approach should be used in the listing process, with an adequate sample size. The tremendous implications or attainment/impairment decisions argue for the use of rigorous and statistically-valid data sets.
11. Fact Sheets -- Explain the proposed listings and de-listings, including constituents of concern, the data used, and the water quality standard and the basis for the decision to list or de-list must be provided to the public when the list is made available for public review. This is absolutely essential to enable informed public review, and will go a long way towards instilling confidence in the process and analysis prepared by the Regional Board.

SCAP
SOUTHERN CALIFORNIA ALLIANCE OF
PUBLICLY OWNED TREATMENT WORKS

October 19, 2001

Gerald J. Thibeault
Santa Ana Regional Board
3737 Main Street, Suite 500
Riverside, CA 92501 3339

Dear Mr.Thibeault:

The Southern California Alliance of Publicly Owned Treatment Works (SCAP) is pleased to have the opportunity to comment on the Regional Board's 303(d) list for 2002.

SCAP represents fifty-five member agencies serving some sixteen million residents of southern California and is very active in the water, biosolids and air quality arenas.

SCAP is very concerned about the 303(d) Listing Process currently underway. Each Regional Board is doing the process in a slightly different manner and it is confusing to the public. Due to the varieties of processes throughout southern California, we are concerned that the 2002 list will be difficult for our members to analyze and evaluate. The opportunities being offered for public review do not appear to be meaningful because the Regional Board's have indicated their intent to submit the proposed lists as is, regardless of comments received. Furthermore, the lists are being made available for a very short public review period, if any, and; therefore the process for commenting is not adequate at the local level.

SCAP is very grateful for the Regional Board staff members that have been accessible to SCAP's Water Committee and the workshops that are planned in the near future. Even with a workshop, however, it is our understanding that the lists may already have been forwarded –without the benefit of public comment -- to Sacramento. This creates confusion. Our members question how the Regional Boards will be able to respond to their comments. To allow sufficient time for a full public review of the list, we think and suggest that the SWRCB extend the submittal deadline for the RWQCBs for several months, in recognition of EPA's recent decision to extend the 2002 list submittal deadline to October 2002 so that local interested parties can have an adequate comment and response process at the Regional level.

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We understand that the SWRCB will be commencing development of a statewide listing policy in the near future. Our thoughts regarding the listing process, *Principals for 303(d) Listing Process*, are attached.

We appreciate the opportunity to comment and ask that you send our comments to Sacramento with your proposed 2002 lists.

Very truly yours,

Raymond C. Miller
Executive Director

Cc: Board Members
Celeste Cantú
Tom Howard

SCAP
SOUTHERN CALIFORNIA ALLIANCE OF
PUBLICLY OWNED TREATMENT WORKS

July 3, 2001

Gerald J. Thibeault
Santa Ana Regional Board
3737 Main Street, Suite 500
Riverside, CA 92501-3339

Re: SCAP Comments on 2002 Water Quality Assessment and Update of the 303 (d) List of Impaired Waterbodies

Dear Mr. Thibeault:

On behalf of the Southern California Alliance of Publicly Owned Treatment Works (SCAP), I am pleased to submit comments on the pending 305 (b) Water Quality Assessment and the 303 (d) list. SCAP's fifty-six public agency members provide wastewater and water services to over sixteen million residents in Southern California. The following comments were prepared by a workgroup of SCAP members.

1. SCAP encourages the Regional Board to carefully read and consider all comments submitted individually by our member agencies.
2. Under the Clean Water Act, as part of their biennial water quality assessments required under Section 305 (b), states are supposed to prepare analyses, among other things, of the extent to which "fishable/swimmable" uses have been or will be achieved, and what additional actions are necessary to achieve them; an estimate of the environmental impact, the economic and social costs, the economic and social benefits, and the estimated date of achievement; and a description of the nature and extent of nonpoint sources of pollutants, recommendations as to the programs which must be undertaken to control each category of such sources, and an estimate of the costs of implementing such programs. *33 U.S.C. Sec. 1315* The Regional Board must complete the required analyses during its water quality assessment, and we recommend that this be done prior to the 303 (d) listing process. We also request that a draft of the 305 (b) report be made available to the public for comment prior to being finalized and submitted to the State Water Resources Control Board.
3. SCAP supports the idea of a "preliminary list" or "watch list, on which waterbodies with inadequate or insufficient data would be placed in lieu of the 303 (d) list. Waters on the watch list would be targeted for further data gathering and assessment before either being placed on the 303 (d) list or designated as supporting the beneficial use(s). The National Research Council suggested such a list in their 2001 report assessing the effectiveness of TMDLs.[1] This has the potential to greatly reduce

[1] Assessing the TMDL Approach to Water Quality Management, prepublication copy, 2001.

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the burden caused by allocating valuable resources to addressing waters that may not truly be impaired, and focus funding and effort on true impairments.

4. SCAP urges caution regarding extrapolation of impacts on a specific waterbody based on data from a different body of water. Regional data, which have been generalized from limited data, when used, must be utilized appropriately.

5. SCAP believes that the Regional Board must only use adopted water quality standards, such as water quality objectives that have legally been adopted in the Basin Plan and approved by the State Water Resources Control Board, the Office of Administrative Law, and EPA, as the basis for the 305 (b) report or 303 (d) listings. Informal criteria that have not been formally adopted in accordance with Water Code requirements and the Administrative Procedures Act are known as "underground regulations" and cannot be legally used as the basis for the water quality assessment or 303 (d) listing.[2]

6. The Regional Board should specify what factors (including those listed below) are considered as "evidence," and how such evidence is weighted in making use of support/non-support decisions.

    a. Consider spatial, temporal (at several scales), and hydrologic variations and their effects on water quality when preparing the 2002 303 (d) list. We recommend that the Regional Board adopt a "weight of evidence" approach in preparing the 303 (d) list. Among other things, this will necessitate an understanding of variability in water quality data. In Southern California, stream flow is one of the largest sources of variability in water quality data. Stream flow is dependent on spatial, temporal (especially seasonal), and hydrologic variations. Not accounting for the effects of stream flow on water quality can bias the data set with respect to making impairment determinations. For the weight of evidence approach, one also will need to know how spatial variation was assessed, especially as it relates to effluent-dependent waterbodies. A good weight of evidence approach needs sample sets that are spatially and temporally representative of conditions in the waterbody. Sample locations should be characteristic of the main water mass or distinct hydrologic areas.

    b. For uses related to aquatic life, consider biological indicators as having a greater weight than pollutant concentration levels, to the extent that some waters may have unimpaired beneficial uses even though some chemical criteria have been exceeded. Among other reasons, this may occur because water quality objectives or criteria that are based on national guidance may not be reflective of local or site-specific conditions.

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[2] Cal. Gov. Code Sec. 11340 defines "regulation," in relevant part, as "every rule, regulation, order, or standard of general application or the amendment, supplement, or revision of any rule, regulation, order, or standard adopted by any state agency to implement, interpret, or make specific the law enforced or administered by it." Cal. Gov. Code Sec. 11342 An "underground regulation" is invalid and unenforceable because it has not been promulgated in accordance with the Administrative Procedures Act. *Frankel v. Kizer*, 21 Cal. App. 4th 743, 747 (Cal. App. 2d Dist., Dec. 13, 1993).

c. Consider on a case-by-case basis, whether or not a waterbody is oligotrophic, mesotrophic, or eutrophic and provide criteria for each type.

d. Eliminate subjective criteria such as "significant amount observed."

7. In the 1997 interagency 303 (d) listing guidance, EPA and SWRCB directed the Regional Boards to delist waters if certain factors were met. One guideline that does not appear to have been fully implemented called for recognition of control measures already in place – or expected to be installed within the next listing cycle – that will result in protection of beneficial uses. Control measures that should be considered an adequate basis for delisting include permits, clean up and abatement, cease and desist, or time schedule orders, and watershed management plans that are enforceable and include a time schedule for compliance with objectives. Prior EPA 303 (d) guidance also recommended this be taken into account. For example, within the Los Angeles Region, many inland waters are listed as being impaired by ammonia, yet all of the publicly owned treatment works are under compliance schedules to meet the ammonia water quality objectives contained in the Basin Plan in the next 1-2 years. Presumably, these waters will come into compliance with the ammonia objective when these dischargers meet this requirement. Therefore, we recommend that the Regional Board review these and other 303 (d) listings for which enforceable requirements have been adopted during this listing cycle.

8. In reviewing your prior staff reports regarding adoption of water quality assessment and/or 303 (d) listing, there has been very little explanation provided regarding how assessment decisions were made. Therefore, the following items reflect SCAP's recommendations that we believe are essential for the 2002 water quality assessment process.

In a recent Draft EPA Consolidated Assessment and Listing Methodology (CALM) report, several good recommendations are made for how states should conduct their listing processes. We are including several items based on CALM, as well as some additional items, that summarize the analytical and public review process we recommend the Regional Board follow. These comments supplement the comments previously submitted by SCAP regarding opportunities for public participation in the water quality assessment process.

- A thorough explanation of the thinking process that went into each decision should be made available in writing.
- The Regional Board should document each of the types of data that support water quality decision-making and explain how they are used in the context of applicable water quality standards to support different water quality determinations.
- A description of and reference for the quality assurance procedures should be included in water quality assessment and listing documentation. The Regional Board should define data quality requirements and how they utilize and interpret data to make decisions about whether the waterbody is impaired or attaining water quality standards.

- Metadata for the field data, i.e., when measurements were taken, locations, number of samples, detection limits, etc., should be in the administrative record and, upon request, made available to interested parties. The Regional Board should recognize that not all data are of equal value for assessing water quality standards attainment/impairment. Results of chemical data or any other type of data analysis are of limited value unless they are accompanied by documentation about sample collection (SOPs), analytical methods, and quality control protocols. Electronic copies of data and metadata should be made available, upon request.
- When data from citizen volunteer group's water quality monitoring efforts is used, the name of the group, the hours of training in water quality assessment completed by members of the group, SOPs, documentation of training of volunteers in both sampling and field testing, and whether a state certified lab was utilized should be provided. Finally, these data must meet the Regional Board's prior agreed upon standards for data quality.
- Sample size is an important element of data quality. In general, in the CALM draft, EPA is recommending that in order to have a high level of confidence in the results, a sample size of at least 30 samples is necessary. Recognizing that sample size is a big debate, we believe that a statistically-bases approach should be used in the listing process, with an adequate sample size. Therefore, the 5 samples, and sometimes 3 samples, used in prior assessment and listing processes seem less than sufficient. Not withstanding all the arguments about sample size, the tremendous implications of attainment/impairment decisions argue for the use of rigorous and statistically-valid data sets.
- What are the compelling reasons to list a waterbody, and does one reason have more weight than another?
- Fact sheets that explain proposed listings and delistings, including constituents of concern, the data used, and the water quality standard and the basis for the decision to list or delist must be provided to the public when the list is made available for public review. This is absolutely essential to enable informed public review, and will go a long way towards instilling confidence in the process and analysis prepared by the Regional Board.

SCAP is very aware of the tremendous burden this process puts on the Regional Board staff. These comments imply changes that we think will improve the process. SCAP looks forward to working with you during this process and recommends informal workshop meetings for this purpose.

Regards,

Raymond C. Miller
Executive Director

cc: Pavlova Vitale

SCAP

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DRAFT
Principals for 303(d) Listing Process

1. **Listing Process**

done ✓ a) The water quality assessment process should be used to develop a preliminary (watch) list and an action list (the 303(d) list). Placement of a waterbody on the watch list would trigger further data gathering and assessment.

✓ b) The basis of and process for listing and de-listing must be "transparent."

c) The State should adopt a Listing Policy containing listing criteria and procedural requirements as a publicly adopted document through a full regulatory process.

d) The State's Listing Policy should include:

- A description of how different types of data will be evaluated;
- An explanation of how the following factors will be considered:
  i. data quality, age, degree of confidence, degree of exceedances
- A description of procedures for collecting and using ambient water quality data;
- A description of methods and factors to develop a prioritized schedule for TMDL development;
- A description of factors for putting waters on the "watch" list, the "action" list, and to de-list waters from both lists.
- A requirement for the development of Fact Sheets that explain the proposed listings and de-listings, including constituents of concern, the data used, and the water quality standard and the basis for the decision to list or de-list. This information must be provided to the public when the list is made available for public review. This is absolutely essential to enable informed public review, and will go a long way towards instilling confidence in the process and analysis prepared by the Regional Board.

- A description of and reference for the quality assurance procedures should be included in water quality assessment and listing documentation. The Regional Board should define data quality requirements and how they utilize and interpret data to make decisions about whether the water body is impaired or attaining water quality standards.

2. Listing Criteria

e) The Listing Policy should embody a weight of evidence approach, including:

- Consideration of spatial, temporal (at several scales), and hydrologic variations and their effects on water quality;
- For uses related to aquatic life, consideration that biological indicators should be given a greater weight than pollutant concentration levels, to the extent that some waters may have unimpaired beneficial uses even though some chemical criteria have been exceeded. Water quality objectives or criteria that are based on national guidance may not be reflective of local on-site specific conditions.

f) With respect to nutrient issues, the State should consider on a case-by-case basis whether or not a water body is oligotrophic, mesotrophic or eutrophic and provide criteria for each type.

g) The Listing Policy should eliminate subjective criteria such as "significant amount observed."

h) The Listing Policy should recognize control measures already in place – or expected to be installed within the next listing cycle – that will result in protection of beneficial uses. Control measures that should be considered an adequate basis for not listing (or for de-listing) include permit requirements, clean up and abatement, cease and desist, or time schedule orders, and watershed management plans that are enforceable and include a time schedule for compliance with objectives.

i) The Listing Policy should address the issue of sample size. Recognizing that sample size is a big debate, we believe that a statistically-based approach should be used in the listing process, with an adequate sample size (e.g. 30 samples). The tremendous implications of attainment/impairment decisions argue for the use of rigorous and statistically-valid data sets.

ATTACHMENT D

SANTA ANA REGION 2001/2002
PROPOSED SECTION 303(D)LIST

DRAFT 2002 CALIFORNIA 303(d) LIST AND TMDL PRIORITY SCHEDULE

09-Nov-01

REGION	TYPE	NAME	HYDRO UNIT	POLLUTANT/STRESSOR*	SOURCE	PRIORITY	SIZE AFFECTED	UNIT	START DATE	END DATE
8	B	Anaheim Bay	80111000							
				Metals		Medium	402.015	Acres	2006	2010
					URBAN RUNOFF/STORM SEWERS					
					Unknown Nonpoint Source					
				Pesticides		Medium	402.015	Acres	2006	2010
					Unknown Nonpoint Source					
8	B	Huntington Harbour	80111000							
				Metals		Medium	220.904	Acres	2006	2010
					URBAN RUNOFF/STORM SEWERS					
					Boatyards					
				Pathogens		Medium	220.904	Acres	2006	2010
					URBAN RUNOFF/STORM SEWERS					
				Pesticides		Medium	220.904	Acres	2006	2010
					Unknown Nonpoint Source					
8	B	Newport Bay, Lower	80114000							
				Metals		High	767.3	Acres	1999	2007
					URBAN RUNOFF/STORM SEWERS					
					CONTAMINATED SEDIMENTS					
					Boatyards					
				Pesticides		High	767.3	Acres	1999	2002
					AGRICULTURE					
					CONTAMINATED SEDIMENTS					
				Priority Organics		High	767.3	Acres	1999	2002
					CONTAMINATED SEDIMENTS					
					Unknown Nonpoint Source					
8	E	Newport Bay, Upper (Ecological Reserve)	80111000							
				Metals		High	652.915	Acres	1999	2002
					URBAN RUNOFF/STORM SEWERS					
				Pesticides		High	652.915	Acres	1999	2002
					AGRICULTURE					
					Unknown Nonpoint Source					

* Comments presented under each pollutant/stressor are not required under Clean Water Act Section 303(d). They are provided for information.

DRAFT 2002 CALIFORNIA 303(d) LIST AND TMDL PRIORITY SCHEDULE

09-Nov-01

REGION	TYPE	NAME	HYDRO UNIT	POLLUTANT/STRESSOR*	SOURCE	PRIORITY	SIZE AFFECTED	UNIT	START DATE	END DATE
8	L	Big Bear Lake	80171000							
				Copper		High	2865.01	Acres	2002	2005
					RESOURCE EXTRACTION					
				Mercury		High	2865.01	Acres	2002	2005
					RESOURCE EXTRACTION					
				Metals		High	2865.01	Acres	2002	2005
					RESOURCE EXTRACTION					
				Noxious aquatic plants		High	2865.01	Acres	2002	2005
					CONSTRUCTION					
					Unknown point source					
				Nutrients		High	2865.01	Acres	2002	2005
					CONSTRUCTION					
					Snow skiing activities					
				Sedimentation/Siltation		High	2865.01	Acres	2002	2005
					CONSTRUCTION					
					Snow skiing activities					
					Unknown Nonpoint Source					
8	L	Canyon Lake (Railroad Canyon Reservoir)	80211000							
				Nutrients		High	452.68	Acres	2002	2004
					NONPOINT SOURCE					
				Pathogens		High	452.68	Acres	2002	2004
					NONPOINT SOURCE					
				Sedimentation/Siltation		Medium	452.68	Acres	2008	2011
				East Bay part of Canyon Lake impaired due to sediments						
					Erosion/Siltation					
					NONPOINT SOURCE					
8	L	Elsinore, Lake	80231000							
				Nutrients		High	2430.59	Acres	2002	2004
					Unknown Nonpoint Source					
				Org. enrichment/Low D.O.		High	2430.59	Acres	2002	2004
					Unknown Nonpoint Source					
				Sedimentation/Siltation		High	2430.59	Acres	2002	2004
					URBAN RUNOFF/STORM SEWERS					

* Comments presented under each pollutant/stressor are not required under Clean Water Act Section 303(d). They are provided for information.

DRAFT 2002 CALIFORNIA 303(d) LIST AND TMDL PRIORITY SCHEDULE

09-Nov-01

REGION	TYPE	NAME	HYDRO UNIT	POLLUTANT/STRESSOR*	SOURCE	PRIORITY	SIZE AFFECTED	UNIT	START DATE	END DATE
				Unknown Toxicity	Unknown Nonpoint Source	High	2430.59	Acres	2002	2004
8	L	Fulmor, Lake	80221000	Pathogens	Unknown Nonpoint Source	Low	4.17	Acres	2008	2011
8	L	Prado Park Lake	80121000	Nutrients	NONPOINT SOURCE	Low	0	Acres	2008	2011
				Pathogens	NONPOINT SOURCE	Low	0	Acres	2008	2011
8	R	Buck Gully Creek	80111000	High Coliform Count	SOURCE UNKNOWN	Medium	3.79218	Miles	2008	2011
8	R	Chino Creek Reach 1	80121000	Nutrients	AGRICULTURE Dairies	Medium	7.76	Miles	2000	2005
				Pathogens	Dairies URBAN RUNOFF/STORM SEWERS	High	7.76	Miles	2000	2005
8	R	Chino Creek Reach 2	80121000	High Coliform Count	Unknown Nonpoint Source	High	2.51	Miles	2000	2005
8	R	Cucamonga Creek, Valley Reach	80121000	High Coliform Count	Unknown Nonpoint Source	High	9.57409	Miles	2000	2005
8	R	Grout Creek	80171000	Metals	Unknown Nonpoint Source	High	3.51	Miles	2002	2005
				Nutrients	Unknown Nonpoint Source	High	3.51	Miles	2002	2005

* Comments presented under each pollutant/stressor are not required under Clean Water Act Section 303(d). They are provided for information.

DRAFT 2002 CALIFORNIA 303(d) LIST AND TMDL PRIORITY SCHEDULE

09-Nov-01

REGION	TYPE	NAME	HYDRO UNIT	POLLUTANT/STRESSOR*	SOURCE	PRIORITY	SIZE AFFECTED	UNIT	START DATE	END DATE
8	R	Knickerbocker Creek	80171000	Metals	Unknown Nonpoint Source	High	1.98926	Miles	2003	2005
				Pathogens	Unknown Nonpoint Source	High	1.98926	Miles	2003	2005
8	R	Los Trancos Creek (Crystal Cove Crk)	80111000	High Coliform Count	SOURCE UNKNOWN	Medium	4.94605	Miles	2008	2011
8	R	Lytle Creek	80141000	Pathogens	Unknown Nonpoint Source	Low	40.83	Miles	2008	2011
8	R	Mill Creek (Prado Area)	80121000	Nutrients	AGRICULTURE Dairies	Medium	1.58	Miles	2000	2005
				Pathogens	Dairies	High	1.58	Miles	2000	2005
				Suspended solids	Dairies	Medium	1.58	Miles	2000	2005
8	R	Mill Creek Reach 1	80156000	Pathogens	Unknown Nonpoint Source	Low	12.35	Miles	2008	2011
8	R	Mill Creek Reach 2	80158000	Pathogens	Unknown Nonpoint Source	Low	12.39	Miles	2008	2011
8	R	Mountain Home Creek	80158000	Pathogens	Unknown Nonpoint Source	Low	3.67	Miles	2008	2011

* Comments presented under each pollutant/stressor are not required under Clean Water Act Section 303(d). They are provided for information.

DRAFT 2002 CALIFORNIA 303(d) LIST AND TMDL PRIORITY SCHEDULE

09-Nov-01

REGION	TYPE	NAME	HYDRO UNIT	POLLUTANT/STRESSOR*	SOURCE	PRIORITY	SIZE AFFECTED	UNIT	START DATE	END DATE
8	R	Mountain Home Creek, East Fork	80158000	Pathogens	Unknown Nonpoint Source	Low	5.08	Miles	2008	2011
8	R	Muddy Creek	80111000	High Coliform Count	SOURCE UNKNOWN	Medium	3.69284	Miles	2008	2011
8	R	Pelican Hill Waterfall Creek	80111000	High Coliform Count	SOURCE UNKNOWN	Medium	1.0575	Miles	2008	2011
8	R	Pelican Point Middle Creek	80111000	High Coliform Count	SOURCE UNKNOWN	Medium	1.31349	Miles	2008	2011
8	R	Rathbone (Rathbun) Creek	80171000	Nutrients	Snow skiing activities Unknown Nonpoint Source	High	4.68	Miles	2002	2005
				Sedimentation/Siltation	Snow skiing activities Unknown Nonpoint Source	High	4.68	Miles	2002	2005
8	R	San Diego Creek Reach 1	80111000	High Coliform Count	URBAN RUNOFF/STORM SEWERS Other Urban Runoff	Medium	7.83	Miles	2010	2015
				Metals	Unknown Nonpoint Source	High	7.83	Miles	1999	2002
				Pesticides	Unknown Nonpoint Source	High	7.83	Miles	1999	2002
8	R	San Diego Creek Reach 2	80111000	Metals	URBAN RUNOFF/STORM SEWERS	High	6.27476	Miles	1999	2002

* Comments presented under each pollutant/stressor are not required under Clean Water Act Section 303(d). They are provided for information.

DRAFT 2002 CALIFORNIA 303(d) LIST AND TMDL PRIORITY SCHEDULE

09-Nov-01

REGION	TYPE	NAME	HYDRO UNIT	POLLUTANT/STRESSOR*	SOURCE	PRIORITY	SIZE AFFECTED	UNIT	START DATE	END DATE
				Unknown Toxicity	Unknown Nonpoint Source	High	6.27476	Miles	1999	2002
8	R	Santa Ana Delhi Channel	80111000	High Coliform Count	SOURCE UNKNOWN	High	6.77845	Miles	2010	2015
8	R	Santa Ana River, Reach 3	80121000	Pathogens	Dairies	High	25.5	Miles	2000	2005
8	R	Santa Ana River, Reach 4	80127000	Pathogens	NONPOINT SOURCE	Low	14.1776	Miles	2008	2011
8	R	Santiago Creek, Reach 4	80112000	Salinity/TDS/Chlorides	SOURCE UNKNOWN	Low	9.8	Miles	2008	2011
8	R	Silverado Creek	80112000	Pathogens	Unknown Nonpoint Source	Low	11.31	Miles	2008	2011
				Salinity/TDS/Chlorides	Unknown Nonpoint Source	Low	11.31	Miles	2008	2011
8	R	Summit Creek	80171000	Nutrients	CONSTRUCTION	High	1.46952	Miles	2002	2005
8	X	Huntington Beach State Park	80111000	High Coliform Count *Huntington State Beach from Newland Avenue to Santa Ana River impaired due to coliform"*	SOURCE UNKNOWN	High	5.78596	Miles	2007	2011
8	X	Newport Beach	80111000	High Coliform Count *Newport Beach from 19th Street to 43rd Street and 1000 feet down coast from Santa Ana River impaired due to coliform."*	SOURCE UNKNOWN	High	4.10127	Miles	2005	2009

* Comments presented under each pollutant/stressor are not required under Clean Water Act Section 303(d). They are provided for information.

DRAFT 2002 CALIFORNIA 303(d) LIST AND TMDL PRIORITY SCHEDULE

09-Nov-01

REGION	TYPE	NAME	HYDRO UNIT	POLLUTANT/STRESSOR*	SOURCE	PRIORITY	SIZE AFFECTED	UNIT	START DATE	END DATE
8	X	Pelican Point Creek	80111000	High Coliform Count	SOURCE UNKNOWN	Medium	0.80037	Miles	2008	2011
8	X	Seal Beach	80111000	High Coliform Count *Seal Beach impaired from San Gabriel River breakwater (1st Street) to Main Street*	SOURCE UNKNOWN	High	0.49704	Miles	2007	2011

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DRAFT 2002 CALIFORNIA 303(d) LIST AND TMDL PRIORITY SCHEDULE

09-Nov-01

REGION	TYPE	NAME	HYDRO UNIT	POLLUTANT/STRESSOR*	SOURCE	PRIORITY	SIZE AFFECTED	UNIT	START DATE	END DATE

ABBREVIATIONS

REGIONAL WATER QUALITY CONTROL BOARDS

1 North Coast
2 San Francisco Bay
3 Central Coast
4 Los Angeles
5 Central Valley
6 Lahontan
7 Colorado River Basin
8 Santa Ana
9 San Diego

WATER BODY TYPE

B = BAYS AND HARBORS
C = COASTAL SHORELINES
E = ESTUARIES
G = GROUND WATER
L = LAKES / RESERVOIRS
O = OCEAN AND OPEN BAYS
R = RIVERS / STREAMS
S = SALINE LAKES
T = WETLANDS, TIDAL
W= WETLANDS, FRESHWATER
X= BEACHES/COASTAL SHORELINES

HYDRO UNIT

"Hydro Unit" is the State Water Resources Control Board hydrological subunit area.

START AND END DATES

Start and End Dates are shown as the year or as month/year.

GROUP A PESTICIDES OR CHEM A

aldrin, dieldrin, chlordane, endrin, heptachlor, heptachlor epoxide, hexachlorocyclohexane (including lindane), endosulfan, and toxaphen

* Comments presented under each pollutant/stressor are not required under Clean Water Act Section 303(d). They are provided for information.

2001 Water Quality Assessment Worksheets

Coastal Water Bodies

1. Anaheim Bay:

- Beneficial Uses: REC1, REC 2, NAV, BIOL, RARE, WILD, SPWN, MAR
- Hydrologic Unit: 801.11
- Total Water Body Size: 180 acres
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Coastal Fish Contamination Data:
  - Shiner Surfperch – 1/1 exceeded the MTRL ddepp_w standard of 32.0 ug/kg
  - Yellow Croaker - 1/1 exceeded the MTRL ddepp_w standard of 32.0 ug/kg
  - Yellowfin Croaker – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Diamond Turbot – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - 2/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Dieldrin standard of 0.7 ug/kg
  - 2/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" total PCB standard of 5.3 ug/kg
  - Diamond Turbot – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Diamond Turbot – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Black Surfperch - 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Black Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Yellowfin Croaker – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Yellowfin Croaker – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Diamond Turbot - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Diamond Turbot – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Black Surfperch - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Black Surfperch – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g

- Diamond Turbot – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Black Surfperch – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Shiner Surfperch – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Yellow Croaker – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg

Orange County PFRD data:

- 0/1 exceeded the "EBE 4-Day Average" Cd standard of 9.3 ug/L
- 0/1 exceeded the "EBE 4-Day Average" Cr standard of 50 ug/L
- 1/1 exceeded the "EBE 4-Day Average" Cu standard of 3.1 ug/L
- 0/1 exceeded the "EBE 4-Day Average" Pb standard of 8.1 ug/L
- 1/1 exceeded the "EBE 4-Day Average" Ni standard of 8.2 ug/L
- 0/1 exceeded the "EBE 4-Day Average" Zn standard of 81 ug/L

Anaheim Bay / Navy Marsh

- Data Analyses:

Coastal Fish Contamination Data:

- 0/1 exceeded the FDA Hg standard of 1.0 ppm wet weight
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Aldrin standard of 0.33 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan I standard of 64,800 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan II standard of 64,800 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan Sulfate standard of 64,800 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" alpha HCH standard of 1.7 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" beta HCH standard of 6.0 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" gamma HCH standard of 8.2 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" heptachlor standard of 2.3 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" heptachlor epoxide standard of 1.2 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" heptachlorobenzene standard of 6.7 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" toxaphene standard of 9.8 ug/kg

Orange County PFRD data

- 0/2 exceeded the "EBE 4-Day Average" Cd standard of 9.3 ug/L
- 0/2 exceeded the "EBE 4-Day Average" Cr standard of 50 ug/L
- 2/2 exceeded the "EBE 4-Day Average" Cu standard of 3.1 ug/L
- 0/2 exceeded the "EBE 4-Day Average" Pb standard of 8.1 ug/L
- 2/2 exceeded the "EBE 4-Day Average" Ni standard of 8.2 ug/L
- 0/2 exceeded the "EBE 4-Day Average" Zn standard of 81 ug/L

- Potential Sources: Unknown at this time

- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results. Water quality assessment study currently underway

- TMDL Priority: None at this time

- TMDL Start Date: Not applicable at this time

- TMDL End Date: Not applicable at this time

2. Bolsa Chica:

- Beneficial Uses: REC 1, REC 2, BIOL, WILD, RARE, SPWN, MAR, EST
- Hydrologic Unit: 801.11
- Total Water Body Size: 294 acres
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Orange County PFRD data:
  - 0/4 exceeded the "EBE 4-Day Average" Cd standard of 9.3 ug/L
  - 0/4 exceeded the "EBE 4-Day Average" Cr standard of 50 ug/L
  - 4/4 exceeded the "EBE 4-Day Average" Cu standard of 3.1 ug/L
  - 0/4 exceeded the "EBE 4-Day Average" Pb standard of 8.1 ug/L
  - 4/4 exceeded the "EBE 4-Day Average" Ni standard of 8.2 ug/L
  - 0/4 exceeded the "EBE 4-Day Average" Zn standard of 81 ug/L
  - Bolsa Chica State Beach Life Guard Station # 18 posted 0 times in 3 years
  - Bolsa Chica State Beach Life Guard Station # 23 posted 1 time in 3 years during dry season
  - Bolsa Chica State Beach Reserve posted 0 times in 3 years
  - Bolsa Chica State Beach Warner Avenue posted 0 times in 3 years
- Potential Sources: urban runoff
- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.
- TMDL Priority: None at this time
- TMDL Start Date: Not applicable at this time
- TMDL Start Date: Not applicable at this time

3. Buck Gully Creek:

- Beneficial Uses: MUN, REC 1 AND REC 2, WARM
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Orange County Health Care Agency Data:
  - 230/239 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
  - 18/56 (30 day periods) exceeded the 1995 Basin Plan REC 2 Fecal Coliform standard
  - 13/56 30 day log means exceeded the 1995 Basin Plan REC 1 standard for Fecal Coliform and 18/56 exceeded but do not have enough samples
- Potential Sources: Unknown at this time, possible urban runoff sources
- Recommendation: Listing on 303(d) list for MUN, REC 1 and REC 2 beneficial uses
- TMDL Priority: Medium
- TMDL Start Date: 2008
- TMDL End Date: 2011

NOTE BASIN PLAN STANDARDS FOR BACTERIA FOR STREAMS:

- MUN -Total coliform less than 100 orgs/100 ml
- REC-1 - Fecal coliform log mean less than 200 organisms/100 ml based on five or more samples/30 day period, and not more than 10% of the samples exceed 400 organisms/100 ml for any 30 day period
- REC-2 – Fecal coliform average less than 2000 organisms/100 ml and not more than 10% of samples exceed 4000 organisms/100 ml for any 30 day period

4. Huntington Harbour:

- Beneficial Uses: NAV, REC 1, REC 2, COMM, WILD, RARE, SPWN, MAR
- Hydrologic Unit: 801.11
- Total Water Body Size: 150 acres
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Orange County PFRD data:
  - 0/4 exceeded the "EBE 4-Day Average" Cd standard of 9.3 ug/L
  - 0/4 exceeded the "EBE 4-Day Average" Cr standard of 50 ug/L
  - 4/4 exceeded the "EBE 4-Day Average" Cu standard of 3.1 ug/L
  - 0/4 exceeded the "EBE 4-Day Average" Pb standard of 8.1 ug/L
  - 3/4 exceeded the "EBE 4-Day Average" Ni standard of 8.2 ug/L
  - 0/4 exceeded the "EBE 4-Day Average" Zn standard of 81 ug/L

Huntington Harbour at Edinger Street

- Data Analyses:
  Statewide Mussel Watch data:
  - 2/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Dieldrin standard of 0.7 ug/kg
  - 2/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" total PCB standard of 5.3 ug/kg
  - 1/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" toxaphene standard of 9.8 ug/kg
  - 0/2 exceeded the FDA Hg standard of 1.0 ppm wet weight
  - 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Aldrin standard of 0.33 ug/kg
  - 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan I standard of 64,800 ug/kg
  - 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan II standard of 64,800 ug/kg
  - 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan Sulfate standard of 64,800 ug/kg
  - 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" alpha HCH standard of 1.7 ug/kg
  - 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" beta HCH standard of 6.0 ug/kg

- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" gamma HCH standard of 8.2 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" helptachlor standard of 2.3 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" heptachlor epoxide standard of 1.2 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" heptachlorobenzene standard of 6.7 ug/kg

Huntington Harbour at Warner Ave. Bridge

- Data Analyses:

State Wide Mussel Watch Data

- 2/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Dieldrin standard of 0.7 ug/kg
- 1/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" toxaphene standard of 9.8 ug/kg
- 2/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" total PCB standard of 5.3 ug/kg
- 0/2 exceeded the FDA Hg standard of 1.0 ppm wet weight
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Aldrin standard of 0.33 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan I standard of 64,800 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan II standard of 64,800 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" Endosulfan Sulfate standard of 64,800 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" alpha HCH standard of 1.7 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" beta HCH standard of 6.0 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" gamma HCH standard of 8.2 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" helptachlor standard of 2.3 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" heptachlor epoxide standard of 1.2 ug/kg
- 0/2 exceeded the "MTRLs in Enclosed Bays and Estuaries" heptachlorobenzene standard of 6.7 ug/kg

Orange County PFRD data:

- 0/2 exceeded the "EBE 4-Day Average" Cd standard of 9.3 ug/L
- 0/2 exceeded the "EBE 4-Day Average" Cr standard of 50 ug/L
- 2/2 exceeded the "EBE 4-Day Average" Cu standard of 3.1 ug/L
- 0/2 exceeded the "EBE 4-Day Average" Pb standard of 8.1 ug/L
- 1/2 exceeded the "EBE 4-Day Average" Ni standard of 8.2 ug/L
- 0/2 exceeded the "EBE 4-Day Average" Zn standard of 81 ug/L

- Potential Sources: Urban runoff

- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results. Water Quality Assessment study currently underway.

- TMDL Priority: None at this time

- TMDL Start Date: Not applicable at this time

- TMDL End Date: Not applicable at this time

5. Huntington Beach State Park:

- Beneficial Uses: REC 1 AND REC 2, MAR
- Hydrologic Unit: 801.11
- Total Water Body Size: 3 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:

  Coastal Fish Contamination Data:
  - Shiner Surfperch – 1/1 exceeded the MTRL ddepp_w standard of 32 ug/kg
  - Barred Surfperch – 0/1 exceeded the MTRL endosulfan standard of 64.8 mg/kg
  - Barred Surfperch – 0/1 exceeded the NAS endosulfan standard of 0.1 ug/g
  - Shiner Surfperch – 0/1 exceeded the MTRL endosulfan standard of 64.8 mg/kg
  - Shiner Surfperch – 0/1 exceeded the NAS endosulfan standard of 0.1 ug/g
  - Barred Surfperch – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg

Huntington Beach Pier

- Data Analyses:

  Coastal Fish Contamination Data:
  - Yellowfin Croaker – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
  - Yellowfin Croaker (pier)- 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Yellowfin Croaker (pier) – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Yellowfin Croaker (pier) – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Barred Surfperch (pier) – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Barred Surfperch (pier) – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Barred Surfperch (pier) – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Shiner Surfperch (pier) -1/1 exceeded the MTRL Hg standard of 0.00037 ug/g

- Shiner Surfperch (pier) – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- Shiner Surfperch (pier) – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
- Yellowfin Croaker (pier) – 0/1 exceeded the MTRL endosulfan standard of 64.8 mg/kg
- Yellowfin Croaker (pier) – 0/1 exceeded the NAS endosulfan standard of 0.1 ug/g

Huntington City Beach

- *Orange County Health Care Agency:*
  - Dog Beach posted 1 time in 3 years during wet season- Heal the Bay Report Card grade unavailable for this segment of the beach.
  - Bluffs posted 0 times in 3 years – Heal the Bay Report Card grade is A for dry and D for wet seasons.
  - 17th Street Beach posted 0 times in 3 years – Heal the Bay Report Card grade is A for dry and F for wet seasons.
  - Jack's Snackbar Beach posted 0 times in 3 years – Heal the Bay Report Card grade is A for dry and D for wet seasons.
  - Guardlife station #9, 6, 1, 11, 15, and 24 posted 0 times in 3 years – Heal the Bay Report Card grade unavailable for these segements of the beach.
  - 150 feet up and down coast of of Huntington Street posted 0 times in 3 years. Heal the Bay Report Card grade is unavailable for this segment of the beach.
  - 500 feet up and down coast of Hunt Street posted 0 times in 3 years. Heal the Bay Report Card grade unavailable for this segment of the beach.

- Potential Sources: Unknown at this time

- Recommendation:
  - Place Huntington State Beach (from Newland Ave to Santa Ana River) on 303(d) list for impairment of REC 1, 2 beneficial uses due to bacterial contamination
  - Place Dog Beach on the Priority 1 monitoring category due to recommendation from the Orange County Health Care Agency that the most recent data shows that the beach does not meet the 7 day criteria used to determine impairment.
  - Overall, more fish tissue monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.
- TMDL Priority: High
- TMDL Start Date: 2007
- TMDL End Date: 2011

6. Los Trancos Creek (Crystal Cove Creek)

- Beneficial Uses: MUN REC 1 AND REC 2, WARM
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:

Dr. Ford's data from Irvine Company sampling data:

- LTU upstream - 0/1 (one sample available per 30 day period) exceeded the 1995 Basin Plan REC 1 Fecal Coliform standard
- LT bridge – 1/1 (one sample available per 30 day period) exceeded the 1995 Basin Plan REC 1 Fecal Coliform standard
- LTU upstream – 7/7 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
- LT bridge - 7/7 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
- LT1 mouth – 3/6 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
- LTU upstream – 0/4 (30 day periods) exceeded the 1995 Basin Plan REC 2 Fecal Coliform standard
- LT bridge – 1/4 (30 day periods) exceeded the 1995 Basin Plan REC 2 Fecal Coliform standard
- LT1 mouth – [not enough sample available]
- LT1 mouth - 0/4 (30 day periods) exceeded the 1995 Basin Plan REC 2 avg <2000 orgs/mL and 10% sample < 4000 orgs/mL Fecal Coliform standard

Orange County Health Care Agency data:

- 264/269 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
- CC upstream – 114/117 exceeded the 1995 Basin Plan MUN<100 orgs/100 mL Total Coliform standard
- 22/56 (30 day periods) exceeded the 1995 Basin Plan REC 2 Fecal Coliform standard
- CC upstream - 25/36 (30 day periods) exceeded the 1995 Basin Plan REC 2 Fecal Coliform standard
- CC upstream - 16/36 30 day log means exceeded the 1995 Basin Plan REC 1 standard for Fecal Coliform and 13/36 exceeded but do not have enough samples

- 24/56 30 day log means exceeded the 1995 Basin Plan REC 1 standard for Fecal Coliform and 22/56 exceeded but do not have enough samples
- Crystal Cove Los Trancos Beach posted 0 times in 3 years. Hela the Bay grade is A in dry season and A in wet season.
- Crystal Cove State Park Treasure Cove posted 0 times in 3 years. Heal the Bay grade is A in wet season and A in dry season.

- Potential Sources: all sources unknown, possible urban runoff

- Recommendation: List on the 303(d) list for impairment of REC 1, REC 2, and MUN beneficial uses

- TMDL Priority: Medium

- TMDL Start Date: 2008

- TMDL End Date: 2011

7. Muddy Creek:

- Beneficial Uses: MUN, REC 1 AND REC 2, WARM
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Dr Ford's Irvine Company monitoring data:
  - MC1 – [not enough sample available]
  - MC1 mouth – 2/4 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
  - MC1 mouth – 0/4 (30 day periods) exceeded the 1995 Basin Plan REC 2 avg <2000 orgs/mL and 10% sample < 4000 orgs/mL Fecal Coliform standard
  - 75/108 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
  - 16/53 (30 day periods) exceeded the 1995 Basin Plan REC 2 Fecal Coliform standard
  - 11/54 30 day log means exceeded the 1995 Basin Plan REC 1 standard for Fecal Coliform and 18/54 exceeded but do not have enough samples
  - Crystal Cove Muddy Creek Beach
- Potential Sources: all sources unknown
- Recommendation: List on 303(d) list for impairment of REC 1, 2 and MUN beneficial uses
- TMDL Priority: medium
- TMDL Start Date: 2008
- TMDL End Date: 2011

8. Newport Bay:

- Beneficial Uses: NAV, REC 1, REC 2, COMM, WILD, RARE, SPWN, MAR, SHEL
- Hydrologic Unit: 801.11
- Total Water Body Size: 752 acres and 700 acres (1452 acres overall)
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time

Overall Bay

- Data Analyses:

Coastal Fish Contamination Data:

- Shiner Surfperch – 1/2 exceeded the MTRL Hg standard of 0.00037 ug/g
- Yellowfin Croaker – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
- Yellowfin Croaker – 1/1 exceeded the MTRL ddepp_w standard of 32.0 ug/kg
- Shiner Surfperch– 2/2 exceeded the MTRL ddepp_w standard of 32.0 ug/kg
- Spotted Turbot – 1/1 exceeded the MTRL ddepp_w standard of 32.0 ug/kg
- Diamond Turbot – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Diamond Turbot - 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- Shiner Surfperch – 0/2 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Shiner Surfperch – 0/2 exceeded the NAS Endosulfan standard of 0.1 ug/g
- Spotted Turbot – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Spotted Turbot – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- Yellowfin Croaker – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Yellowfin Croaker – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g

Newport Bay Above PCH Bridge

- Data Analyses:

Coastal Fish Contamination Data:

- Diamond Turbot – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Shiner Surfperch – 2/2 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Spotted Turbot – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Yellowfin Croaker – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Diamond Turbot – 0/1 exceeded the MTRL Hg standard of 0.00037 ug/g
- Diamond Turbot – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- Diamond Turbot – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
- Shiner Surfperch – 1/2 exceeded the MTRL Hg standard of 0.00037 ug/g
- Shiner Surfperch – 0/2 exceeded the NAS Hg standard of 0.5 ug/g
- Shiner Surfperch – 0/2 exceeded the FDA Hg standard of 1.0 ug/g
- Spotted Turbot – 0/1 exceeded the MTRL Hg standard of 0.00037 ug/g
- Spotted Turbot – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- Spotted Turbot – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
- Yellowfin Croaker – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
- Yellowfin Croaker – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- Yellowfin Croaker – 0/1 exceeded the FDA Hg standard of 1.0 ug/g

Newport Pier

- Data Analyses:
  - Spotted Turbot – 1/1 exceeded the MRTL Hg standard of 0.00037 ug/g
  - Spotted Turbot – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Spotted Turbot – 0/1 exceeded the FDA Hg standard of 1 ug/g
  - Barred Surfperch – 2/2 exceeded the MRTL Hg standard of 0.00037 ug/g
  - Barred Surfperch – 0/2 exceeded the NAS Hg standard of 0.5 ug/g
  - Barred Surfperch – 0/2 exceeded the FDA Hg standard of 1 ug/g

- California Corbina – 1/1 exceeded the MRTL Hg standard of 0.00037 ug/g
- California Corbina – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- California Corbina – 0/1 exceeded the FDA Hg standard of 1 ug/g
- Yellowfin Croaker – 1/1 exceeded the MRTL Hg standard of 0.00037 ug/g
- Yellowfin Croaker – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- Yellowfin Croaker – 0/1 exceeded the FDA Hg standard of 1 ug/g
- White Croaker – 1/1 exceeded the MRTL Hg standard of 0.00037 ug/g
- White Croaker – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- White Croaker – 0/1 exceeded the FDA Hg standard of 1 ug/g
- Spotted Turbot - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Spotted Turbot – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- Barred Surfperch - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Barred Surfperch – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- California Cobrina - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- California Cobrina – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- Yellowfin Croaker - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Yellowfin Croaker – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- Spotted Turbot – 0/1 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg
- California Corbina – 0/1 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg
- Yellowfin Croaker – 0/1 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg
- Barred Surfperch – 1/2 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg
- White Croaker – 1/1 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg

Newport Beach Pier

- Data Analyses:

  Coastal Fish Contamination Data:

  - Barred Surfperch – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Barred Surfperch – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - White Croaker - – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - White Croaker – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g

Newport Jetty

- Data Analyses:

  Coastal Fish Contamination Data:

  - Spotted Scorpionfish – 1/1 exceeded the MRTL Hg standard of 0.00037 ug/g
  - Spotted Scorpionfish – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Spotted Scorpionfish – 0/1 exceeded the FDA Hg standard of 1 ug/g
  - Spotted Turbot – 2/2 exceeded the MRTL Hg standard of 0.00037 ug/g
  - Spotted Turbot – 0/2 exceeded the NAS Hg standard of 0.5 ug/g
  - Spotted Turbot – 0/2 exceeded the FDA Hg standard of 1 ug/g
  - Spotted Scorpionfish – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Spotted Scorpionfish – 0/1 exceded the NAS Endosulfan standard of 0.1 ug/g
  - Spotted Turbot – 0/2 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Spotted Turbot – 0/2 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Black Surfperch – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Black Surfperch - 0/1 exceded the NAS Endosulfan standard of 0.1 ug/g
  - Shiner Surfperch – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Shiner Surfperch - 0/1 exceded the NAS Endosulfan standard of 0.1 ug/g
  - Spotted Scorpionfish – 0/1 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg
  - Spotted Turbot – 0/2 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg
  - Black Surfperch – 0/1 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg

- Shiner Surfperch – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Black Surfperch – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
- Black Surfperch – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- Black Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
- Shiner Surfperch – 0/1 exceeded the MTRL Hg standard of 0.00037 ug/g
- Shiner Surfperch – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- Shiner Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g

Balboa Pier

- Data Analyses:

  Coastal Fish Contamination Data:

  - Walleye Surfperch – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Walleye Surfperch – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Walleye Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Diamond Turbot – 2/2 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Diamond Turbot – 0/2 exceeded the NAS Hg standard of 0.5 ug/g
  - Diamond Turbot – 0/2 exceeded the FDA Hg standard of 1.0 ug/g
  - Barred Surfperch – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Barred Surfperch – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Barred Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Walleye Surfperch - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Walleye Surfperch – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Diamond Turbot - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Diamond Turbot – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Barred Surfperch - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Barred Surfperch – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Diamond Turbot – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg

- Walleye Surfperch – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Diamond Turbot – 0/2 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
- Barred Surfperch – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg

- Potential Sources: Unknown at this time

- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: none at this time

- TMDL Start Date: not applicable at this time

- TMDL End Date: not applicable at this time

9. Newport Bay Beaches:

- Beneficial Uses: REC 1 AND REC 2, MAR
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  - *Coastal Fish Contamination Data:*
    - Walleye Surfperch 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
    - Barred Surfperch – 2/2 exceeded the MTRL Hg standard of 0.00037 ug/g
    - California Corbina – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
    - California Corbina – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
    - California Corbina – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
    - White Croaker – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
    - Walleye Surfperch – 1/1 exceeded the MTRL Ocean Waters dield_w standard of 0.2 ug/kg
    - Walleye Surfperch – 1/1 exceeded the MTRL Bays and Estuaries dield_w standard of 0.7 ug/kg
    - Walleye Surfperch – 0/1 exceeded the NAS dield_w standard of 0.1 ug/g
    - Walleye Surfperch – 0/1 exceeded the FDA dield_w standard of 0.3 ug/g
    - Walleye Surfperch – 1/1 exceeded the ddepp_w standard of 32.0 ug/kg
    - Barred Surfperch – 1/2 exceeded the MTRL ddepp_w standard of 32.0 ug/kg
    - Shiner Surfperch – 1/1 exceeded the MTRL ddepp_w standard of 32.0 ug/kg
    - White Croaker - 1/1 exceeded the MTRL ddepp_w standard of 32.0 ug/kg
    - Walleye Surfperch – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
    - Walleye Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g

- Barred Surfperch – 0/2 exceeded the NAS Hg standard of 0.5 ug/g
- Barred Surfperch – 0/2 exceeded the FDA Hg standard of 1.0 ug/g
- Shiner Surfperch – 0/1 exceeded the MTRL Hg standard of 0.00037 ug/g
- Shiner Surfperch – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- Shiner Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
- White Croaker – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
- White Croaker - 0/1 exceeded the FDA Hg standard of 1.0 ug/g
- Walleye Surfperch - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Walleye Surfperch – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- Barred Surfperch - 0/2 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Barred Surfperch – 0/2 exceeded the NAS Endosulfan standard of 0.1 ug/g
- California Cobrina - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- California Cobrina – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- Shiner Surfperch - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- Shiner Surfperch – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- White Croaker - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
- White Croaker – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
- California Corbina – 0/1 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg

- *Orange County Health Care Agency data:*
  - Newport Beach 38th Street Beach posted 5 times in 3 years during the wet and dry season. Heal the Bay grade is D for dry season and F for wet season.
  - Newport Beach 43rd Street Beach posted 1 time in 3 years during the dry season and Heal the Bay grade is F during the dry and F during the wet season.
  - Newport Beach 52-53rd Street Beach posted 0 times in 3 years. Heal the Bay Grade not available.

- Newport Beach 19th Street Beach posted 2 times in 3 years during the dry and wet seasons. Heal the Bay grade is A during the dry and F during the wet season.
- Newport Beach 1000 feet down coast of Santa Ana River posted 1 time in 3 years during the wet season.
- Newport Beach 300 feet down coast of Santa Ana River posted 0 times in 3 years.
- Newport Beach 10th Street Beach posted 0 times in 3 years and Heal the Bay grade is A in dry season and F in the wet season.
- Newport Beach 15th Street Beach posted 0 times in 3 years. Heal the Bay grade is A in the dry season and F in the wet season.
- Corona del Mar Beach posted 0 times in 3 years. Heal the Bay grade is A in the dry season and F in the wet season.
- Little Corona Beach posted 1 time in 3 years. Heal the Bay grade is B for the dry season and F in the wet season.

- Potential Sources: Unknown at this time

- Recommendation:

  - Place Little Corona Beach on the Priority 1 monitoring category due to recommendation from the Orange County Health Care Agency that the most recent data shows that the beach does not meet the 7 day criteria used to determine impairment.
  - No action recommended for Newport Beach from 19th Street to 43rd Street because this beach is on the Newport Bay side and not on the ocean side.
  - List Newport Beach segment that stretches from the Santa Ana River to 1000 feet down coast from Santa Ana River on 303(d) list for impairment of REC 1, 2 beneficial uses due to bacterial contamination

  - Overall, more fish tissue monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: High

- TMDL Start Date: 2005

- TMDL End Date: 2009

10. Ocean Waters

- Beneficial Uses: REC 1, REC 2, NAV, MAR, COMM, WILD, RARE, SPWN, SHEL
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time

Emma Oil Platform

- *Coastal Fish Contamination Data:*
- Data Analyses:
  - Black Surfperch – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Black Surfperch – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Black Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Kelp Bass - 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Kelp Bass – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Kelp Bass - 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Opaleye – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Opaleye – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Opaleye - 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Black Surfperch – 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Black Surfperch – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Kelp Bass - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Kelp Bass – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Opaleye - 0/1 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Opaleye – 0/1 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Black Surfperch – 0/2 exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg
  - Kelp Bass - exceeded the “MTRLs in Enclosed Bays” ddepp_w standard of 32.0 ug/kg

Esther Oil Platform

- *Coastal Fish Contamination Data:*

- Data Analyses:
  - Kelp Bass – 1/1 exceeded the MTRLs in Ocean Waters dield_w standard of 0.2 ug/kg
  - Kelp Bass – 1/1 exceeded the MTRLs in Bays and Estuaries dield_w standard of 0.7 ug/kg
  - Kelp Bass – 0/1 exceeded the NAS dield_w standard of 0.1 ug/g
  - Kelp Bass – 0/1 exceeded the FDA dield_w standard of 0.3 ug/g
  - Black Surfperch – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Black Surfperch – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Black Surfperch – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Kelp Bass – 1/1 exceeded the MTRL Hg standard of 0.00037 ug/g
  - Kelp Bass – 0/1 exceeded the NAS Hg standard of 0.5 ug/g
  - Kelp Bass – 0/1 exceeded the FDA Hg standard of 1.0 ug/g
  - Black Surfperch – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
  - Kelp Bass – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg

- Potential Sources: Unknown at this time

- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: None at this time

- TMDL Start Date: Not applicable at this time

- TMDL End Date: Not applicable at this time

11. Pelican Point Creek

- Beneficial Uses: MUN, REC 1 AND REC 2, WARM
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: entire creek
- Extent of Impairment: Unknown at this time
- Data Analyses:

Mouth of Creek

- Data Analyses:

  Orange County Health Care Agency data;

  - 225/230 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
  - 31/55 (30 day periods) exceeded the 1995 Basin Plan REC 2 Fecal Coliform standard
  - 1/56 30 day log means exceeded the 1995 Basin Plan REC 1 standard for Fecal Coliform and 48/56 exceeded but do not have enough samples

- Potential Sources: unknown at this time. Possible urban runoff
- Recommendation: List creek only on the 303 (d) List of impaired water bodies due to REC 1, REC 2, and MUN beneficial use impairments
- TMDL Priority: Medium
- TMDL Start Date: 2008
- TMDL End Date: 2011

12. Pelican Point Middle Creek

- Beneficial Uses: MUN, REC 1 AND REC 2, WARM
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: entire creek
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Orange County Health Care Agency data:
  - 126/133 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
  - 12/50 30 day log means exceeded the 1995 Basin Plan REC 1 standard for Fecal coliform and 12/50 exceeded but do not have enough samples
  - 11/50 30 day periods exceeded the 1995 Basin Plan REC 2 standard for Fecal coliform
- Potential Sources: unknown at this time. Possible urban runoff
- Recommendation: List creek only on the 303 (d) List of impaired water bodies due to REC 1, REC 2, and MUN beneficial use impairments
- TMDL Priority: Medium
- TMDL Start Date: 2008
- TMDL End Date: 2011

13. Pelican Hill Waterfall

- Beneficial Uses: MUN, REC 1 AND REC 2, WARM
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: entire creek
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Orange County Health Care Agency data:
  - 14/64 (30 day periods) exceeded the 1995 Basin Plan REC 2 Fecal Coliform standard
  - 208/220 exceeded the 1995 Basin Plan MUN< 100 orgs/100 mL Total Coliform standard
  - 11/56 30 day log means exceeded the 1995 Basin Plan REC 1 standard for Fecal Coliform and 17/56 exceeded but do not have enough samples
  - Pelican Point Beach posted 0 times in 3 years and Heal the Bay grade is A for dry season and B during wet season.
- Potential Sources: unknown at this time. Possible urban runoff
- Recommendation: List creek only on the 303 (d) List of impaired water bodies due to REC 1, REC 2, and MUN beneficial use impairments
- TMDL Priority: Medium
- TMDL Start Date: 2008
- TMDL End Date: 2011

14. San Diego Creek

- Beneficial Uses: REC 1 and REC 2
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: All of reach 1
- Extent of Impairment: Unknown at this time
- Data Analyses:

  Regional Water Quality Control Board Report:

  - November 24, 1998 TMDL report for Newport Bay indicates that 22 times /22 weeks of sampling, the creek exceeded the total and fecal coliform standards for rec 1 and rec 2.

- Potential Sources: All sources unknown. Potential urban run-off source.
- Recommendation: List Reach 1 on 303 d list for impairment of Rec 1 and Rec 2 beneficial uses
- TMDL Priority: High
- TMDL Start Date: 2010
- TMDL End Date: 2015

15. Santa Ana Delhi Channel

- Beneficial Uses: REC 1, REC 2,
- Hydrologic Unit: 801.11
- Total Water Body Size:
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Orange County Health Care Agency Data:
  - 11/11 times exceeded the Basin Plan MUN< 100 orgs/100 mL Total Coliform standard.

  Regional Water Quality Control Board Report:
  - November 24, 1998 TMDL report for Newport Bay indicates that 22 times /22 weeks of sampling, the creek exceeded the total and fecal coliform standards for rec 1 and rec 2.
- Potential Sources: All sources unknown. Potential urban run-off source.
- Recommendation: List Reach 1 on 303 d list for impairment of Mun, Rec 1 and Rec 2 beneficial uses
- TMDL Priority: High
- TMDL Start Date: 2010
- TMDL End Date: 2015

16. Seal Beach:

- Beneficial Uses: REC 1 and REC 2
- Hydrologic Unit: 801.11
- Total Water Body Size: 1 mile
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:

  Coastal Fish Contamination Data:
  - White Croaker – 0/3 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - White Croaker – 0/3 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - Yellowfin Croaker – 0/2 exceeded the NAS Endosulfan standard of 0.1 ug/g
  - Yellowfin Croaker – 0/2 exceeded the MTRL Endosulfan standard of 64.8 mg/kg
  - White Croaker – 1/3 exceeded the "MTRLs for Carcinogens in Ocean Waters" Hg standard of 0.00037 ug/g
  - White Croaker – 0/3 exceeded the NAS Hg standard of 0.5 ug/g
  - White Croaker – 0/3 exceeded the FDA Hg standard of 1.0 ug/g
  - Yellowfin Croaker – 2/2 exceeded the MTRL's Hg standard of 0.00037 ug/g
  - Yellowfin Croaker – 0/2 exceeded the NAS Hg standard of 0.5 ug/g
  - Yellowfin Croaker – 0/2 exceeded the FDA Hg standard of 1.0 ug/g
  - White Croaker – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
  - Yellowfin Croaker – 0/2 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
  - White Croaker-off – 0/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg
  - White Croaker-on – 1/1 exceeded the "MTRLs in Enclosed Bays" ddepp_w standard of 32.0 ug/kg

- *Orange County Health Care Agency Data:*
  - 1St Street Beach posted 1 time in 3 years during the wet season. Heal the Bay grade is B during the dry season and F during the wet season.

- 8th Street Beach posted 1 time in 3 years during the wet season. Heal the Bay grade is B during the dry season and F during the wet season.
- 14th Street Beach posted 0 times in 3 years. Heal the Bay grade is A during the dry season and C during the wet season.
- State Beach posted 0 times in 3 years. Heal the Bay grade unavailable.
- Breakwater posted 2 times in 3 years during the wet season. Heal the Bay grade not available.

- Potential Sources: Unknown at this time

- Recommendation:

  - List Seal Beach from San Gabriel River breakwater (1st Street) to Main Street on 303(d) list for impairment of REC 1, 2 and MUN beneficial uses due to bacterial contamination

  - More fish tissue monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: High

- TMDL Start Date: 2007

- TMDL End Date: 2011

Inland Water Bodies

1. Canyon Lake:

- Beneficial Uses: MUN, AGR, GWR, REC1, REC2, WARM, WILD
- Hydrologic Unit: 802.11
- Total Water Body Size: 600 acres
- Size Impaired: 52 acres
- Extent of Impairment: Unknown at this time
- Data Analyses: Independent study on East Bay indicates bottom depth rising rapidly due to sedimentation
- Potential Sources: urban runoff, non point source, agricultural runoff
- Recommendation: List East Bay of Canyon Lake on 303(d) list as impaired for REC 1, REC 2 and WARM beneficial uses
- TMDL Priority: Medium
- TMDL Start Date: 2008
- TMDL End Date: 2011

2. Cucamonga Creek:

- Beneficial Uses: MUN, IND, PROC, GWR, POW, REC1, REC2, LWRM, COLD, WILD, SPWN

- Hydrologic Unit: 801.24

- Total Water Body Size: 13 miles

- Size Impaired: Unknown at this time

- Extent of Impairment: Unknown at this time

- Data Analyses:

  Orange County Water District Data:

  - 0/1 (1/year) - exceeded the "CTR for Inorganic Freshwater Aquatic Life Protection" Cd standard of 5.7 ug/L
  - 0/1 (1/year) - exceeded the "CTR for Inorganic Freshwater Aquatic Life Protection" Cu standard of 17.0 ug/L
  - 0/1 (1/year) - exceeded the "CTR for Inorganic Freshwater Aquatic Life Protection" Pb standard of 86.0 ug/L
  - 0/1 (1/year) - exceeded the "CTR for Inorganic Freshwater Aquatic Life Protection" Ni standard of 580 ug/L
  - 0/1 (1/year) - exceeded the "CTR for Inorganic Freshwater Aquatic Life Protection" Se standard of 20 ug/L
  - 0/1 (1/year) - exceeded the "CTR for Inorganic Freshwater Aquatic Life Protection" Zn standard of 150 ug/L

- Potential Sources: Unknown at this time

- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: None at this time

- TMDL Start Date: Not applicable at this time

- TMDL End Date: Not applicable at this time

3. Chino Creek:

- Beneficial Uses: REC1, REC2, WARM, LWRM, WILD, RARE
- Hydrologic Unit: 801.21
- Total Water Body Size: 2 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:

  Orange County Water District Data:
  - Reach 1 – 0/1 exceeded the "Avg CTR Contin. Conc. (4-day avg)" Arsenic standard of 150 ug/L
  - Reach 1 – 0/1 exceeded the "Avg CTR Contin. Conc. (4-day avg)" Cadmium standard of 2.4 ug/L
  - Reach 1 – 0/1 exceeded the "Avg CTR Contin. Conc. (4-day avg)" Lead standard of 2.8 ug/L
  - Reach 1 – 0/1 exceeded the "Avg CTR Contin. Conc. (4-day avg)" Copper standard of 9.7 ug/L
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg nickel standard of 430 ug/L (Based on hardness = 92.6)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg nickel standard of 950 ug/L (Based on hardness = 235)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg nickel standard of 950 ug/L (Based on hardness = 234)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg nickel standard of 910 ug/L (Based on hardness = 220)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg nickel standard of 510 ug/L (Based on hardness = 113)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg cadmium standard of 3.8 ug/L (Based on hardness = 92.6)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg cadmium standard of 11 ug/L (Based on hardness = 235)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg cadmium standard of 11 ug/L (Based on hardness = 234)

  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg cadmium standard of 10 ug/L (Based on hardness = 220)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg cadmium standard of 4.7 ug/L (Based on hardness = 113)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg lead standard of 58 ug/L (Based on hardness = 92.6)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg lead standard of 160 ug/L (Based on hardness = 235)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg lead standard of 160 ug/L (Based on hardness = 234)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg lead standard of 150 ug/L (Based on hardness = 220)
  - Reach 1 – 0/1 exceeded the Cal EPA Tox Rule Criteria Max. Conc. 1 hr Avg lead standard of 72 ug/L (Based on hardness = 113)

- Potential Sources: Unknown at this time

- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: None at this time

- TMDL Start Date: Not applicable at this time

- TMDL End Date: Not applicable at this time

4. Mill Creek (Prado Area):

- Beneficial Uses: REC1, REC2, WARM, WILD, RARE
- Hydrologic Unit: 801.58
- Total Water Body Size: 4 miles
- Size Impaired:
- Extent of Impairment:
- Data Analyses:
  Orange County Water District Data:
  - 0/8 exceeded the "August CTR Continuous Cocn. 4 Day Avg" antimony standard of 14 ug/L
  - 0/8 exceeded the "August CTR Continuous Cocn. 4 Day Avg" copper standard of 13000 ug/L
  - 0/8 exceeded the "August CTR Continuous Cocn. 4 Day Avg" mercury standard of 0.05 ug/L
  - 0/8 exceeded the "August CTR Continuous Cocn. 4 Day Avg" nickel standard of 610 ug/L
- Potential Sources: Unknown at this time
- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.
- TMDL Priority: None at this time
- TMDL Start Date: Not applicable at this time
- TMDL End Date: Not applicable at this time

5. San Timoteo Creek:

- Beneficial Uses: GWR, REC1, REC2, WARM, WILD
- Hydrologic Unit: 801.60
- Total Water Body Size:
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses: no ambient water quality data submitted
- Potential Sources: Unknown at this time
- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.
- TMDL Priority: None at this time
- TMDL Start Date: Not applicable at this time
- TMDL End Date: Not applicable at this time

6. Santa Ana River, Reaches 2 & 3:

- Beneficial Uses: AGR, GWR, REC1, REC2, WARM, WILD, RARE
- Hydrologic Unit: 801.21 AND 801.21
- Total Water Body Size: 18 and 19 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:

  Orange County Water District Data:

  - Reach 3 – 0/6 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection 1-hr avg arsenic standard of 340 ug/L
  - Reach 3 – 0/6 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection 1-hr avg copper standard of 29-36 ug/L
  - Reach 3 – 0/1 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr) lead standard of 190 ug/L
  - Reach 3 – 0/6 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection 1-hr avg nickel standard of 934-1100 ug/L
  - Reach 3 – 0/1 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr) silver standard of 14 ug/L
  - Reach 3 - 0/1 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" arsenic standard of 340 ug/L (1-hr avg)
  - Reach 3 - 0/1 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" copper standard of 16 ug/L (1-hr avg)
  - Reach 3 - 0/1 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" nickel standard of 559 ug/L (1-hr avg)
  - Reach 3 - 0/3 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" arsenic standard of 340 ug/L (1-hr avg)
  - Reach 3 - 0/3 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" copper standard of 28-33 ug/L (1-hr avg)

- Reach 3 - 0/3 exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" nickel standard of 900-1100 ug/L (1-hr avg)
- Reach 3 - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" selenium standard of 20 ug/L (1-hr avg)
- Reach 2 - 0/18 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection" arsenic standard of 340 ug/L (1-hr avg)
- Reach 2 - 0/19 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection" copper standard of 13-35 ug/L (1-hr avg)
- Reach 2 - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" cyanide standard of 22 ug/L (1-hr avg)
- Reach 2 - 0/3 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" lead standard of 140-154 ug/L (1-hr avg)
- Reach 2 - 0/17 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection" nickel standard of 161-274 ug/L (1-hr avg)
- Reach 2 - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" selenium standard of 20 ug/L (1-hr avg)
- Reach 2 - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" zinc standard of 226 ug/L (1-hr avg)
- Reach 3 – 0/4 (1/yr) exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection 1-hr avg arsenic standard of 340 ug/L
- Reach 3 – 0/4 (1/yr) exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection 1-hr avg copper standard of 29-36 ug/L
- Reach 3 – 0/1 (1/yr) exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection 1-hr avg lead standard of 190 ug/L
- Reach 3 - 0/4 (1/yr) exceeded the CTR for Inorganic Constituents Fresh Water Aquatic Life Protection 1-hr avg nickel standard of 935-1100 ug/L

Regional Board Compliance Monitoring Data:

- Reach 3 - 1/18 data points exceed the Basin Plan TDS objective of 700 mg/L
- Reach 3 - 1/55 data points exceed the Basin Plan Total Nitrogen objective of 10 mg/L

- Potential Sources: Unknown at this time

- Recommendation:

    - Delist for TDS and Total Nitrogen

    - More monitoring for other constituents due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: None at this time

- TMDL Start Date: Not applicable at this time

- TMDL End Date: Not applicable at this time

7. Santa Ana River, Reach 4:

- Beneficial Uses: GWR, REC1, REC2, WARM, WILD
- Hydrologic Unit: 801.27
- Total Water Body Size: 12 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Orange County Water District Data:
  - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" arsenic standard of 340 ug/L (1-hr avg)
  - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" copper standard of 26 ug/L (1-hr avg)
  - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" nickel standard of 834 ug/L (1-hr avg)
- Potential Sources: Unknown at this time
- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.
- TMDL Priority: None at this time
- TMDL Start Date: Not applicable at this time
- TMDL End Date: Not applicable at this time

8. Santa Ana River, Reach 5:

- Beneficial Uses: MUN (applies upstream of Orange Ave (Redlands); downstream, water is exempted from MUN), AGR, GWR, REC1, REC2, WARM, WILD, RARE

- Hydrologic Unit: 801.52

- Total Water Body Size: 17 miles

- Size Impaired: Unknown at this time

- Extent of Impairment: Unknown at this time

- Data Analyses:

  Orange County Water District Data:

  - 0/3 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" copper standard of 13-28 ug/L (1-hr avg)
  - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" lead standard of 130 ug/L (1-hr avg)
  - 0/1 exceeded the "CTR for Inorganic Constituents Fresh Water Aquatic Life Protection (1/yr)" nickel standard of 810 ug/L (1-hr avg)

- Potential Sources: Unknown at this time

- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: None at this time

- TMDL Start Date: Not applicable at this time

- TMDL End Date: Not applicable at this time

9. Temescal Creek:

- Beneficial Uses: AGR, IND, GWR, REC1, REC2, WARM, WILD, RARE, SPWN, LWRM

- Hydrologic Unit: 801.25

- Total Water Body Size:

- Size Impaired: Unknown at this time

- Extent of Impairment: Unknown at this time

- Data Analyses:

  Orange County Water District Data

  - 0/1 exceeded the CTR "max. conc. 1-hr avg" arsenic standard of 150 ug/L (based on hardness = 285 mg/L)
  - 0/1 exceeded the CTR "max. conc. 1-hr avg" cadmium standard of 13 ug/L (based on hardness = 285 mg/L)
  - 0/1 exceeded the CTR "max. conc. 1-hr avg" copper standard of 36 ug/L (based on hardness = 285 mg/L)
  - 0/1 exceeded the CTR "max. conc. 1-hr avg" lead standard of 190 ug/L (based on hardness = 285 mg/L)
  - 0/1 exceeded the CTR "max. conc. 1-hr avg" nickel standard of 1100 ug/L (based on hardness = 285 mg/L)
  - 0/1 exceeded the CTR "max. conc. 1-hr avg" zinc standard of 280 ug/L (based on hardness = 285 mg/L)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" cadmium standard of 8.5 ug/L (Based on hardness = 194)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" cadmium standard of 13 ug/L (Based on hardness = 284)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" cadmium standard of 11 ug/L (Based on hardness = 238)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" copper standard of 25 ug/L (Based on hardness = 194)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" copper standard of 36 ug/L (Based on hardness = 284)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" copper standard of 31 ug/L (Based on hardness = 238)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" nickel standard of 810 ug/L (Based on hardness = 194)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" nickel standard of 1100 ug/L (Based on hardness = 284)
  - Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" nickel standard of 980 ug/L (Based on hardness = 238)

- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" lead standard of 130 ug/L (Based on hardness = 194)
- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" lead standard of 190 ug/L (Based on hardness = 284)
- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" lead standard of 170 ug/L (Based on hardness = 238)
- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" selenium standard of 20 ug/L (Based on hardness = 194)
- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" selenium standard of 20 ug/L (Based on hardness = 284)
- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" selenium standard of 20 ug/L (Based on hardness = 238)
- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" zinc standard of 200 ug/L (Based on hardness = 194)
- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" zinc standard of 280 ug/L (Based on hardness = 284)
- Reach 1A – 0/1 exceeded the "Cal Toxics Rule Max Conc 1 hr Avg" zinc standard of 250 ug/L (Based on hardness = 238)

- Potential Sources: Unknown at this time

- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.

- TMDL Priority: None at this time

- TMDL Start Date: Not applicable at this time

- TMDL End Date: Not applicable at this time

Mountain Area Water Bodies

1. Big Bear Lake:

- Beneficial Uses: MUN, AGR, GWR, REC1, REC2, WARM, COLD, WILD, RARE
- Hydrologic Unit: 801.71
- Total Water Body Size: 2970 acres
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:

  Big Bear Municipal Water District Data:
  - Station 1 – 0/8 exceeded the Basin Plan Objective total phosphorus standard of 0.15 mg/L
  - Station 2 – 1/5 exceeded the Basin Plan Objective total phosphorus standard of 0.15 mg/L
  - Station 3 – 0/5 exceeded the Basin Plan Objective total phosphorus standard of 0.15 mg/L
  - Station 4 – 0/5 exceeded the Basin Plan Objective total phosphorus standard of 0.15 mg/L
  - Station 5 – 0/8 exceeded the Basin Plan Objective total phosphorus standard of 0.15 mg/L
  - Station 1 – 8/8 exceeded the Basin Plan Objective total nitrogen standard of 0.15 mg/L
  - Station 2 – 5/5 exceeded the Basin Plan Objective total nitrogen standard of 0.15 mg/L
  - Station 3 – 5/5 exceeded the Basin Plan Objective total nitrogen standard of 0.15 mg/L
  - Station 4 – 5/5 exceeded the Basin Plan Objective total nitrogen standard of 0.15 mg/L
  - Station 5 – 8/8 exceeded the Basin Plan Objective total nitrogen standard of 0.15 mg/L
- Recommendation: None, TMDL development in progress
- Potential Sources: Unknown at this time
- TMDL Priority: High
- TMDL Start Date: 2002
- TMDL End Date: 2005

2. Boulder Creek:

- Beneficial Uses: MUN, GWR, REC1, REC2, COLD, WILD, SPWN
- Hydrologic Unit: 801.71
- Total Water Body Size: 2 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Big Bear Municipal Water District Data:
  - 4/4 exceeded the Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/l
  - 0/4 exceeded the Basin Plan Objective total phosphorus (for Big Bear Lake) of 0.15 mg/L
  - 4/4 exceeded the Basin Plan TIN Objective (for Big Bear Lake) of 0.15 mg/L
- Potential Sources: Unknown at this time
- Recommendation: To be addressed by TMDL for Big Bear Lake that is already underway.
- TMDL Priority: Not applicable
- TMDL Start Date: Not applicable
- TMDL End Date: Not applicable

3. Grout Creek:

- Beneficial Uses: MUN, GWR, REC1, REC2, COLD, WILD, SPWN
- Hydrologic Unit: 801.71
- Total Water Body Size: 2 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Big Bear Municipal Water District Data:
  - 1/2 samples exceeded the Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/l
  - 0/2 exceeded the Basin Plan total phosphorus objective (for Big Bear Lake) of 0.15 mg/L
  - 1/2 exceeded the Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/L
- Potential Sources: Unknown at this time
- Recommendation: already on 303(d) list as impaired for nutrients; TMDL development underway
- TMDL Priority: high
- TMDL Start Date: 2002
- TMDL End Date: 2005

4. Knickerbocker Creek:

- Beneficial Uses: MUN, GWR, REC1, REC2, COLD, WILD (all are intermittent beneficial uses)
- Hydrologic Unit: 801.71
- Total Water Body Size: 2 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Big Bear Municipal Water District Data:
  - 4/4 samples in one location exceeded Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/l
  - 1/4 exceeded the Basin Plan total phosphorus objective (for Big Bear Lake) of 0.15 mg/L
  - 4/4 exceeded the Basin Plan objective (for Big Bear Lake) of total nitrogen standard of 0.15 mg/L
- Potential Sources: Unknown at this time.
- Recommendation: To be addressed by TMDL for Big Bear Lake that is already underway.
- TMDL Priority: Not applicable
- TMDL Start Date: Not applicable
- TMDL End Date: Not applicable

5. Metcalf Creek:

- Beneficial Uses: MUN, GWR, REC1, REC2, COLD, WILD, SPWN
- Hydrologic Unit: 801.71
- Total Water Body Size: 2 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Big Bear Municipal Water District Data:
  - 4/4 exceeded the Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/l
  - 0/4 exceeded the Basin Plan total phosphorus objective (for Big Bear Lake) of 0.15 mg/L
  - 4/4 exceeded the Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/l
- Potential Sources: Unknown at this time
- Recommendation: To be addressed by the Big Bear Lake TMDL already underway.
- TMDL Priority: Not applicable
- TMDL Start Date: Not applicable
- TMDL End Date: Not applicable

6. Rathbun Creek:

- Beneficial Uses: MUN, GWR, REC1, REC2, COLD, WILD
- Hydrologic Unit: 801.71
- Total Water Body Size: 2 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Big Bear Municipal Water District Data:
  - 0/5 exceeded the Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/L
  - 2/2 exceeded the Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/L
  - 0/2 exceeded the Basin Plan total phosphorus objective of 0.15 mg/L
  - 2/2 exceeded the Basin Plan TIN objective (for Big Bear Lake) of 0.15 mg/L
- Recommendation: already on 303(d) list as impaired for nutrients; TMDL development underway
- TMDL Priority: high
- TMDL Start Date: 2002
- TMDL End Date: 2005

7. San Jacinto River North Fork (Reach 7):

- Beneficial Uses: MUN, AGR, GWR, REC1, REC2, COLD, WILD
- Hydrologic Unit: 802.21
- Total Water Body Size:
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:

Lake Hemet Municipal Water District Data:

- 1/4 samples in one location exceeded the aluminum primary MCL (1000 ug/L) and secondary MCL (200 ug/L) for drinking water.
- 0/4 exceeded the antimony primary MCL (6 ug/L) and no secondary MCL for drinking water
- 0/4 exceeded the arsenic primary MCL (50 ug/L) for drinking water
- 0/4 exceeded the barium primary MCL (1000 ug/L) for drinking water
- 0/4 exceeded the beryllium primary MCL (4 ug/L) for drinking water
- 0/4 exceeded the cadmium primary MCL (5 ug/L) for drinking water
- 0/4 exceeded the iron secondary MCL (300 ug/L) for drinking water
- 0/4 exceeded the Basin Plan Objective total hardness objective of 100 mg/L
- 3/4 exceeded the Basin Plan Objective sodium objective of 10 mg/L
- 0/4 exceeded the Basin Plan Objective sulfate objective of 20 mg/L
- 0/4 exceeded the Basin Plan Objective chloride objective of 15 mg/L
- 0/4 exceeded the Basin Plan Objective TDS objective of 150 mg/L

San Jacinto River South Fork (Reach 7):

Lake Hemet Water District Data:

- Reach 7 – 0/4 exceeded the primary (1000 ug/L) and secondary (200 ug/L) MCL DHS drinking water standards
- Reach 7 – 2/4 exceeded the Basin Plan Objective total hardness objective of 100 mg/L
- Reach 7 – 4/4 exceeded the Basin Plan Objective sodium objective of 10 mg/L

- Reach 7 – 0/4 exceeded the Basin Plan Objective sulfate objective of 20 mg/L
- Reach 7 – 3/4 exceeded the Basin Plan Objective chloride objective of 15 mg/L
- Reach 7 – 4/4 exceeded the Basin Plan Objective TDS objective of 150 mg/L

- Potential Sources: Unknown at this time
- Recommendation: More monitoring due to insufficient data points
- TMDL Priority: None at this time
- TMDL Start Date: Not applicable at this time
- TMDL End Date: Not applicable at this time

8. Strawberry Creek:

- Beneficial Uses: MUN, AGR, GWR, REC1, REC2, COLD, WILD
- Hydrologic Unit: 802.21
- Total Water Body Size: 9 miles
- Size Impaired: Unknown at this time
- Extent of Impairment: Unknown at this time
- Data Analyses:
  Lake Hemet Water District Data:
  - 0/4 exceeded the Basin Plan Objective total hardness objective of 100 mg/L
  - 4/4 exceeded the Basin Plan Objective sodium objective of 10 mg/L
  - 0/4 exceeded the Basin Plan Objective sulfate objective of 20 mg/L
  - 3/4 exceeded the Basin Plan Objective chloride objective of 15 mg/L
  - 3/4 exceeded the Basin Plan Objective TDS objective of 150 mg/L
- Potential Sources: Unknown at this time
- Recommendation: More monitoring due to not enough data points available per parameter to reach a conclusion for impairment and insufficient data to back up results.
- TMDL Priority: None at this time
- TMDL Start Date: Not applicable at this time
- TMDL End Date: Not applicable at this time